

MICHIGAN MATERNAL AND CHILD HEALTH COUNTY PROFILES 1993 TO 2002



ABOUT THE REPORT

WHAT IS THE PURPOSE OF THIS REPORT?

The “MCH County Profiles” provide ten years of data at the county level on selected maternal and child health (MCH) performance measures. The purposes of this report are: 1) to assist local public health professionals in better targeting resources and 2) to help monitor the progress being made in local jurisdictions to improve MCH outcomes. This is the second publication of this report covering the ten years from 1993 through 2002.

HOW WERE THE INDICATORS USED IN THIS REPORT SELECTED?

During fiscal year 2000, a “Maternal and Child Health Needs Assessment” was conducted, as required by federal the Maternal and Child Health Bureau. The assessment was conducted by the Divisions of Family and Community Health and the MCH Epidemiology Team at the Michigan Department of Community Health (MDCH). A workgroup, which included representatives of various areas of MCH as well as local representatives, was convened to review data and discuss measures to monitor for the next five years. One of the tasks of the workgroup was to select indicators that have significant impact on the health of women and children in Michigan. The following nine MCH performance goals were selected to monitor for the years 2001-2005:

- Reduce the overall infant mortality rate
- Reduce the percent of preterm births
- Reduce the percent of low birth weight births (< 2,500 grams)
- Reduce the maternal mortality ratio in Black women
- Reduce the percent of live births that are unintended
- Reduce the percent of repeat births to unwed mothers 15-19 years of age
- Increase the percent of Medicaid enrolled children 0 to 6 years of age who receive lead screening
- Increase the percent of CSHCN beneficiaries enrolled in a managed care Specialized Health Plan
- Increase the utilization of dental services by CSHCN recipients (CSHCN reimbursed)

In fiscal year 2005 another Maternal and Child Health Needs Assessment will be conducted. A set of 7-10 indicators will be selected to monitor MCH performance for the years 2006-2010. These MCH indicators form the basis for this report.

HOW IS THE REPORT ORGANIZED:

The first section of this report presents the nine MCH performance measures from 1993 through 2002 for the State of Michigan as a whole. Following the overall state report, the data are presented for each county in alphabetical order.

For each county, demographic information (i.e., poverty status, age, and gender distribution, racial groups, number of live births by year) is first presented. This information is followed by trends in selected MCH indicators, including low birth weight, prematurity, adequacy of prenatal care utilization (as measured by the Kotelchuck Index), teen pregnancy, fetal death, as well as infant and child mortality.

For some counties, the number of certain events did not reach the minimum statistical requirement (at least 6 events) for the rates to be validly calculated. In those instances, the rates are not computed, although the numbers of events are presented.

On the back of each profile are graphical representations of the trends in low birth weight, adequacy of prenatal care utilization, live births to women aged <20 years, and infant mortality rate.

Also presented on the back of each page are the results of the Perinatal Periods of Risk analysis for the county. The Perinatal Periods of Risk analysis requires at least 60 fetoinfant deaths for the analysis to be valid. Therefore, for each county we pooled five years of data of the analysis. If the data are still insufficient after the pooling, the results of the Perinatal Periods of Risk analysis are not presented.

Although Detroit City is a part of Wayne County, the social-demographic profiles of the residents of Detroit city are notably different from those of the residents of out-Wayne County. In addition, the large population size permitted separate analysis of the data of Detroit city and out-Wayne County. Therefore, this report presents the data for Detroit City and Wayne County (excluding Detroit) separately.

WHAT ARE THE SOURCES OF THE DATA:

The data used for estimating the majority of the indicators are provided by the Division of Vital Records and Health Statistics, MDCH. The Perinatal Periods of Risk analyses were performed by staff members of the MCH Epidemiology Team within the Division of Epidemiology Services, Bureau of Epidemiology, based on data provided by the Division of Vital Records and Health Statistics.

WHERE CAN I GET MORE INFORMATION:

The MDCH website, <http://www.mdch.michigan.gov>, has a wealth of information on the vital and health statistics for Michigan residents. Visitors of this web site can get this information by clicking on “Health Statistics and Vital Records” and then navigating through the various pages.

WHERE CAN I GET FURTHER ASSISTANCE:

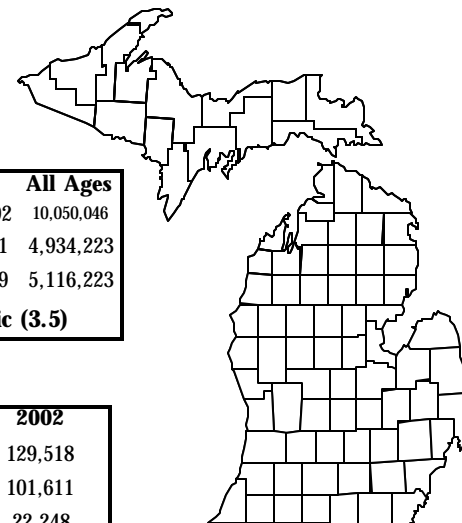
Additional tools have been developed to assist local public health professionals in measuring MCH indicators for their own jurisdictions. These tools include the “Infant

Mortality Workbook for Community Action,” and the “Analysis of the Selected State MCH Measures.” An overview of the Perinatal Periods of Risk Approach can be found in the Infant Mortality Workbook for Community Action. Presentations and training sessions on some of the measures and tools, including the Perinatal Periods of Risk Approach, have been provided at the Local Integration Conference and at the Healthy Mothers, Healthy Babies Conference.

HOW MIGHT I USE THIS DATA:

Interventions at the community level are key to further improvements in MCH outcomes. It is our hope that local public health professionals, agencies, coalitions, and stakeholders will find the information in this report useful in guiding and better targeting their intervention efforts. In addition, these data also give local public health agencies and professionals an opportunity to compare MCH outcomes and their temporal trends in their own jurisdiction with other communities in the state. Healthy Start projects, Fetal Infant Mortality Review groups, Adolescent Health programs, Family Planning programs, and other community-based public health programs may find these data useful in guiding their activities.

STATE of MICHIGAN



2002 Population

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	134,156	663,586	701,631	764,998	723,080	687,435	616,523	712,688	754,446	808,868	771,322	678,046	530,631	405,272	1,231,92	10,050,046
Male	68,777	270,975	359,447	392,172	370,738	346,962	310,409	357,440	376,449	400,989	380,490	333,785	259,803	195,446	510,341	4,934,223
Female	65,379	258,455	342,184	372,826	352,342	340,473	306,114	355,248	377,997	407,879	390,832	344,261	270,828	209,826	721,579	5,116,223
Race(%):	White (81.6) Black (14.4) Native American (0.6) Asian/Pacific Islander (2.1) Multiple (1.4) Ethnicity(%): Hispanic (3.5)															

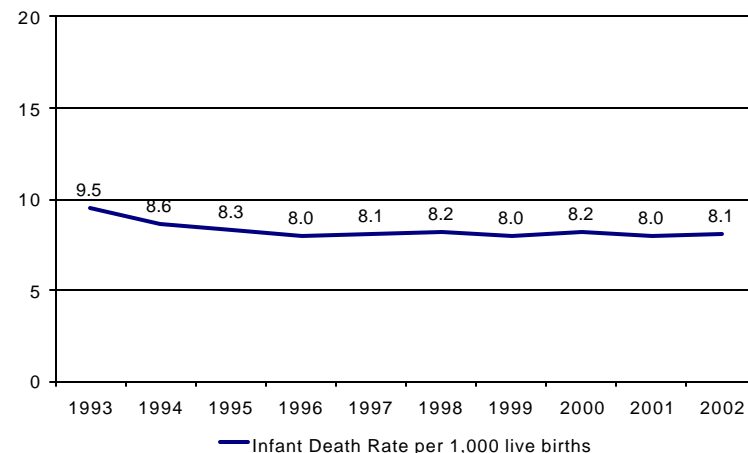
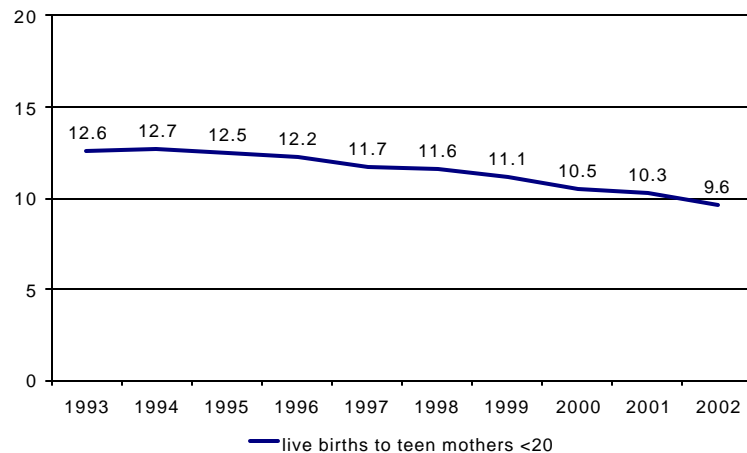
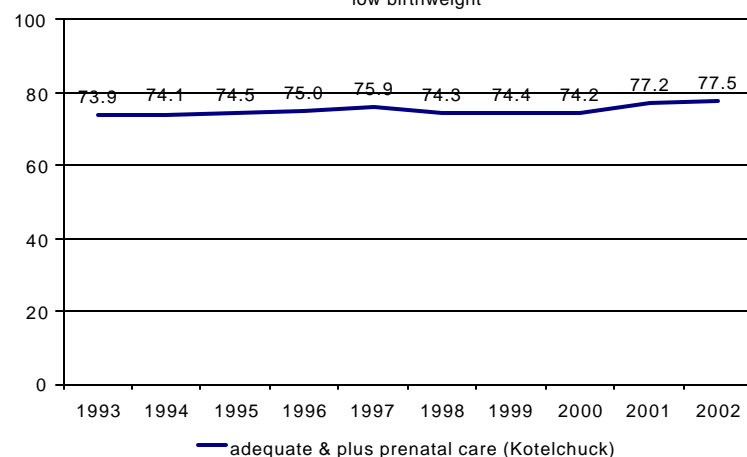
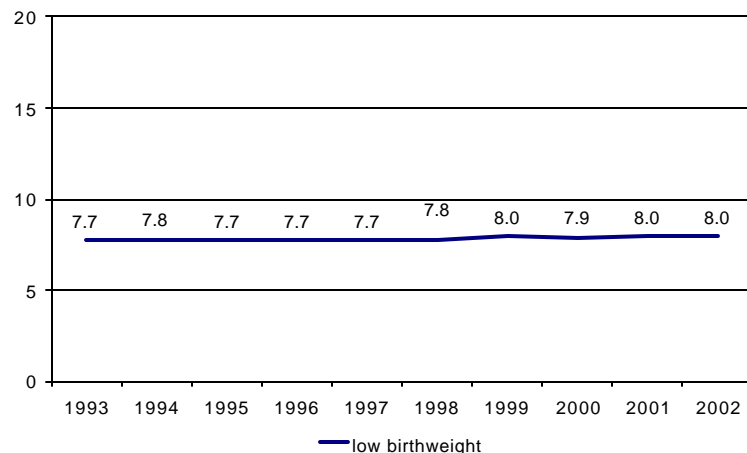
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	139,560	137,844	134,169	133,231	133,549	133,649	133,429	136,048	133,247	129,518
White	108,329	106,828	105,274	104,922	104,980	105,161	104,493	106,322	104,489	101,611
Black	28,249	27,129	24,914	24,073	24,201	24,179	23,850	24,069	23,494	22,248
American Indian	759	841	792	802	761	722	696	674	637	669
Asian & P.I.	1,589	2,209	2,281	2,441	2,829	3,052	3,464	3,736	3,907	4,196

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2,098	1.5	2,201	1.6	1,981	1.5	2,035	1.5	2,095	1.6	2,106	1.6	2,238	1.7	2,133	1.6	2,222	1.7	2,103	1.6
1,500-2,499	8,602	6.2	8,564	6.2	8,375	6.2	8,193	6.1	8,240	6.2	8,362	6.3	8,465	6.3	8,573	6.3	8,492	6.4	8,300	6.4
Total < 2500	10,700	7.7	10,765	7.8	10,356	7.7	10,228	7.7	10,335	7.7	10,468	7.8	10,703	8.0	10,706	7.9	10,714	8.0	10,403	8.0
Preterm																				
Preterm < 37 weeks	15,488	11.1	15,022	10.9	14,196	10.6	13,778	10.3	14,319	10.7	14,646	11.0	14,368	10.8	14,833	10.9	15,017	11.3	14,625	11.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	103,148	73.9	102,134	74.1	100,022	74.5	99,920	75.0	101,371	75.9	99,338	74.3	99,243	74.4	100,954	74.2	102,888	77.2	100,408	77.5
Live Births to Teen Mothers																				
< 18	6,736	4.8	6,697	4.9	6,530	4.9	6,241	4.7	5,660	4.2	5,419	4.1	5,020	3.8	4,828	3.5	4,483	3.4	4,065	3.1
18-19	10,833	7.8	10,751	7.8	10,291	7.7	9,988	7.5	9,976	7.5	10,098	7.6	9,790	7.3	9,489	7.0	9,175	6.9	8,387	6.5
Total under 20	17,569	12.6	17,448	12.7	16,821	12.5	16,229	12.2	15,636	11.7	15,517	11.6	14,810	11.1	14,317	10.5	13,658	10.3	12,452	9.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	726	---	731	---	767	---	759	---	798	---	830	---	784	---	787	---	786	---	748	---
Infant deaths	1,319	9.5	1,184	8.6	1,110	8.3	1,072	8.0	1,085	8.1	1,091	8.2	1,071	8.0	1,112	8.2	1,066	8.0	1,054	8.1
Neonatal	856	6.1	775	5.6	725	5.4	703	5.3	748	5.6	709	5.3	729	5.5	777	5.7	729	5.5	719	5.6
Postneonatal	463	3.3	409	3.0	385	2.9	369	2.8	337	2.5	382	2.9	342	2.6	335	2.5	337	2.5	335	2.6
Age one to nine	435	---	386	---	390	---	353	---	327	---	348	---	323	---	301	---	279	---	271	---
Age ten to nineteen	746	---	800	---	692	---	690	---	704	---	630	---	579	---	599	---	598	---	612	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK - of Michigan Feto-Infant Mortality

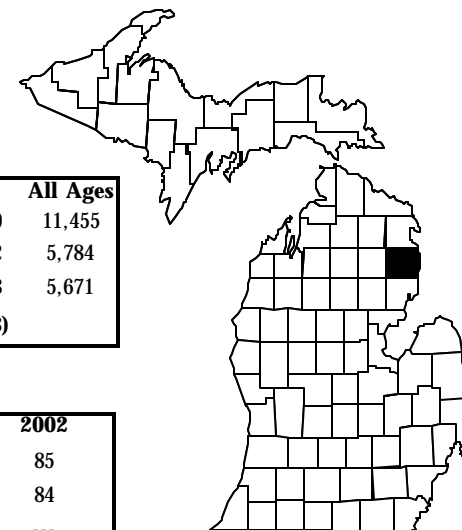
Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		2002	1993	Difference	
< 1500g (all deaths)		3.7	3.8	(-0.1)	Maternal health/prematurity
1500g+	Fetal	1.4	1.8	(-0.4)	Maternal care
	Neonatal	1.3	1.8	(-0.5)	Newborn care
	Postneonatal	2.0	2.8	(-0.8)	Infant health
Total		8.4	10.2	(-1.8)	

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Alcona County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	54	425	545	642	688	463	373	506	693	765	838	798	904	995	2,820	11,455
Male	33	185	282	380	369	240	182	261	347	388	419	396	444	496	1,362	5,784
Female	21	186	263	262	319	223	191	245	346	377	419	402	460	499	1,458	5,671
Race(%):	White (98.4)		Black (0.3)		Native American (0.6)		Asian/Pacific Islander (0.2)		Multiple Race (0.4)		Hispanic (0.8)					

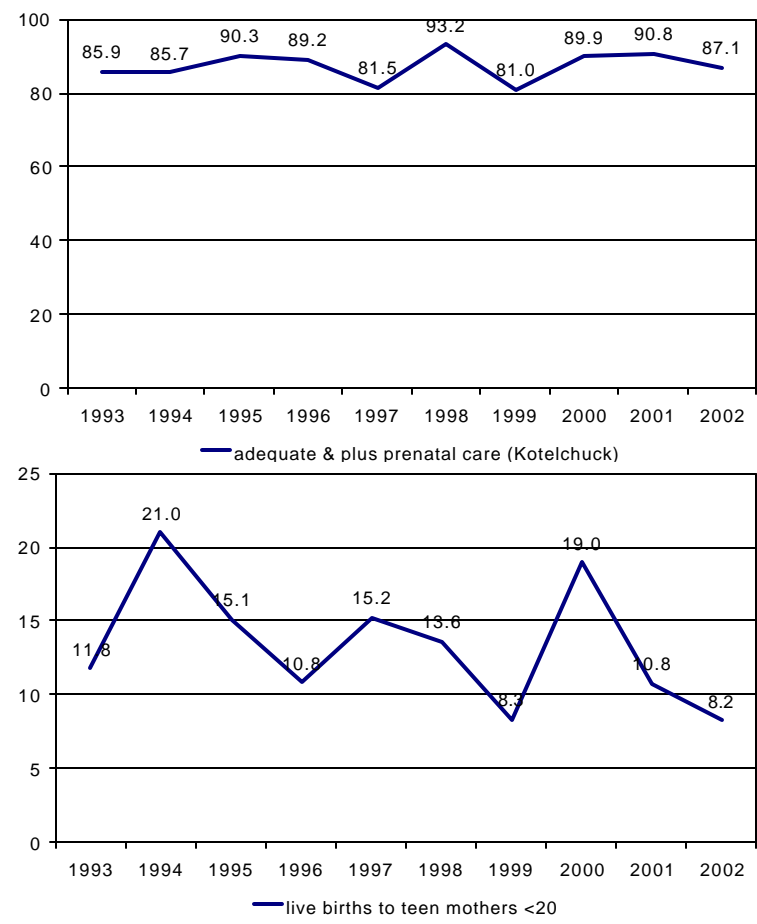
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	85	105	93	93	92	88	84	79	65	85
White	83	102	90	91	90	88	84	79	63	84
Black	---	---	1	---	---	---	---	---	1	---
American Indian	---	---	2	1	1	---	---	---	1	1
Asian & P.I.	2	2	---	1	1	---	---	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	1	---	0	---	1	---	1	---	1	---	1	---	1	---	0	---	4	---
1,500-2,499	4	---	4	---	4	---	4	---	3	---	7	8.0	5	---	6	7.6	4	---	8	9.4
Total < 2500	5	---	5	---	4	---	5	---	4	---	8	9.1	6	7.1	7	8.9	4	---	12	14.1
Preterm																				
Preterm < 37 weeks	6	7.1	8	7.6	13	14.0	11	11.8	11	12.0	14	15.9	2	---	8	10.1	7	10.8	16	18.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	73	85.9	90	85.7	84	90.3	83	89.2	75	81.5	82	93.2	68	81.0	71	89.9	59	90.8	74	87.1
Live Births to Teen Mothers																				
< 18	2	---	4	---	1	---	4	---	7	7.6	3	---	1	---	4	---	1	---	4	---
18-19	8	9.4	18	17.1	13	14.0	6	6.5	7	7.6	9	10.2	6	7.1	11	13.9	6	9.2	3	---
Total under 20	10	11.8	22	21.0	14	15.1	10	10.8	14	15.2	12	13.6	7	8.3	15	19.0	7	10.8	7	8.2
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	2	---	0	---	0	---	1	---	0	---	0	---	1	---	1	---
Infant deaths	1	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---	1	---
Neonatal	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---
Postneonatal	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---
Age one to nine	0	---	0	---	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---
Age ten to nineteen	1	---	2	---	0	---	0	---	3	---	0	---	0	---	0	---	0	---	2	---

*If number is less than 6, the rate is not calculated.

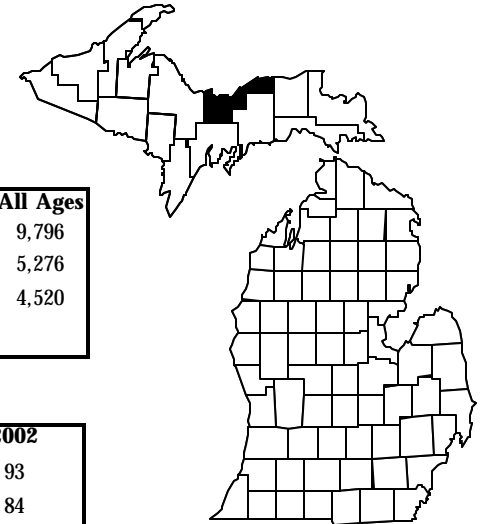
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Alger County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	75	392	510	567	651	619	542	633	718	781	838	730	575	512	1,728	9,796
Male	29	145	266	283	345	401	360	408	430	424	428	398	300	285	774	5,276
Female	46	172	244	284	306	218	182	225	288	357	410	332	275	227	954	4,520
Race(%):	White (88.5)		Black (6.2)		Native American (3.2)		Asian/Pacific Islander (0.4)		Multiple Race (1.7)		Hispanic (1.1)					

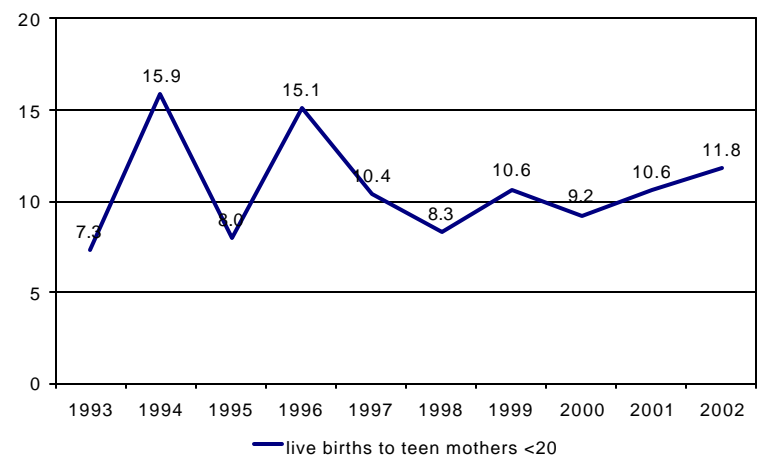
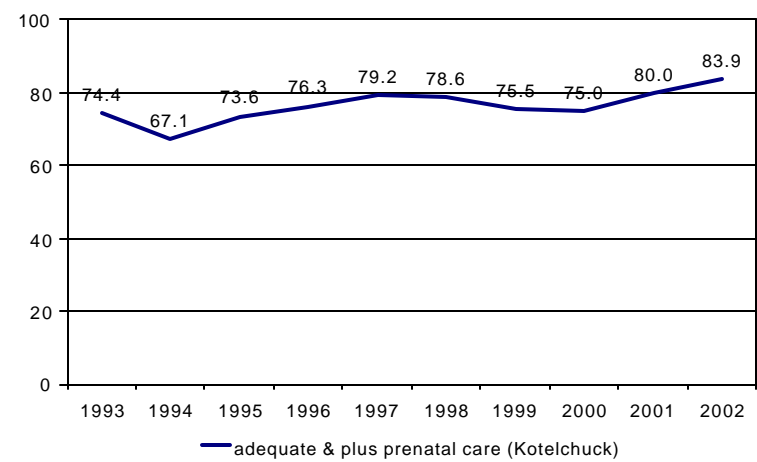
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	82	82	87	93	96	84	94	76	85	93
White	75	78	82	86	94	78	86	74	75	84
Black	---	---	---	---	---	---	---	---	1	---
American Indian	7	2	5	7	2	6	7	2	8	7
Asian & P.I.	---	1	---	---	---	---	---	---	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	0	---	0	---	3	---	1	---	2	---	1	---	0	---	0	---	0	---
1,500-2,499	5	---	3	---	3	---	3	---	4	---	7	8.3	5	---	3	---	5	---	3	---
Total < 2500	5	---	3	---	3	---	6	6.5	5	---	9	10.7	6	6.4	3	---	5	---	3	---
Preterm																				
Preterm < 37 weeks	8	9.8	4	---	4	---	10	10.8	8	8.3	7	8.3	6	6.4	4	---	8	9.4	8	8.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	61	74.4	55	67.1	64	73.6	71	76.3	76	79.2	66	78.6	71	75.5	57	75.0	68	80.0	78	83.9
Live Births to Teen Mothers																				
< 18	4	---	2	---	0	---	1	---	4	---	0	---	3	---	2	---	2	---	2	---
18-19	2	---	11	13.4	7	8.0	13	14.0	6	6.3	7	8.3	7	7.4	5	---	7	8.2	9	9.7
Total under 20	6	7.3	13	15.9	7	8.0	14	15.1	10	10.4	7	8.3	10	10.6	7	9.2	9	10.6	11	11.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	0	---	0	---	0	---	0	---	0	---	1	---	1	---	1	---	1	---
Infant deaths	0	---	1	---	1	---	1	---	1	---	2	---	0	---	0	---	0	---	1	---
Neonatal	0	---	1	---	0	---	1	---	0	---	2	---	0	---	0	---	0	---	0	---
Postneonatal	0	---	0	---	1	---	0	---	1	---	0	---	0	---	0	---	0	---	1	---
Age one to nine	1	---	0	---	0	---	0	---	1	---	0	---	1	---	0	---	2	---	1	---
Age ten to nineteen	0	---	0	---	0	---	1	---	0	---	0	---	0	---	1	---	0	---	0	---

*If number is less than 6, the rate is not calculated.

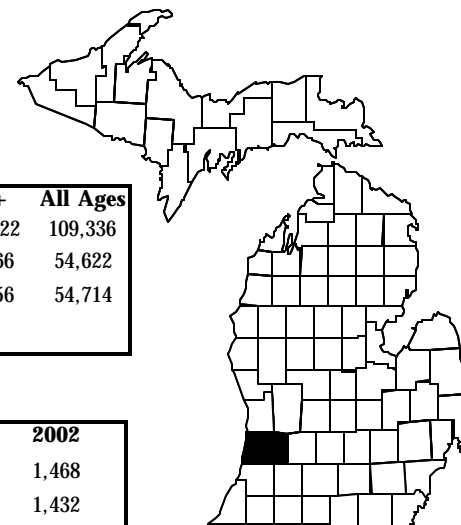
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Allegan County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,419	7,380	8,105	9,113	8,489	7,052	6,204	7,421	8,611	9,353	8,630	7,233	5,393	4,330	12,022	109,336
Male	729	3,090	4,090	4,656	4,392	3,653	3,177	3,652	4,343	4,750	4,379	3,684	2,760	2,101	5,166	54,622
Female	690	2,871	4,015	4,457	4,097	3,399	3,027	3,769	4,268	4,603	4,251	3,549	2,633	2,229	6,856	54,714
Race(%):	White (96.4) Black (1.5) Native American (0.5) Asian/Pacific Islander (0.7) Multiple Race (0.9) Hispanic (5.8)															

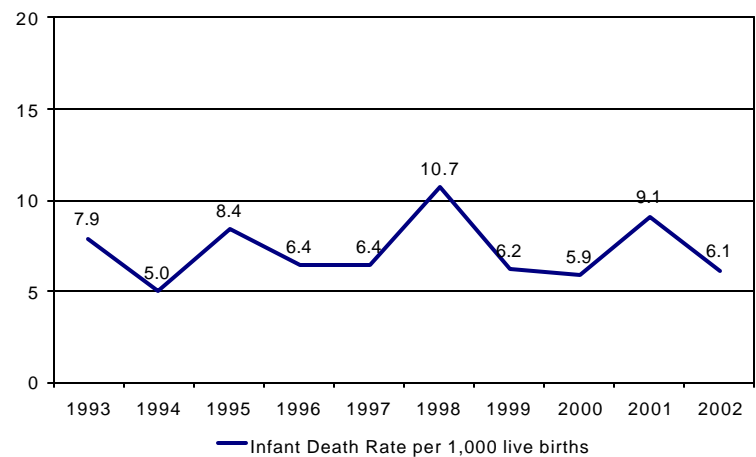
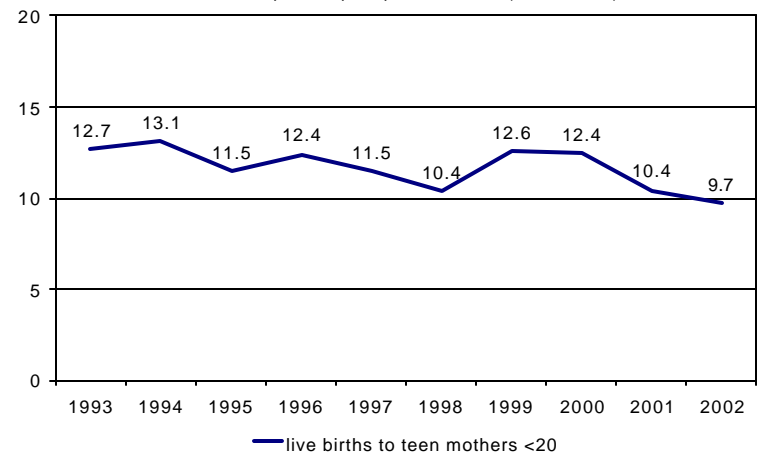
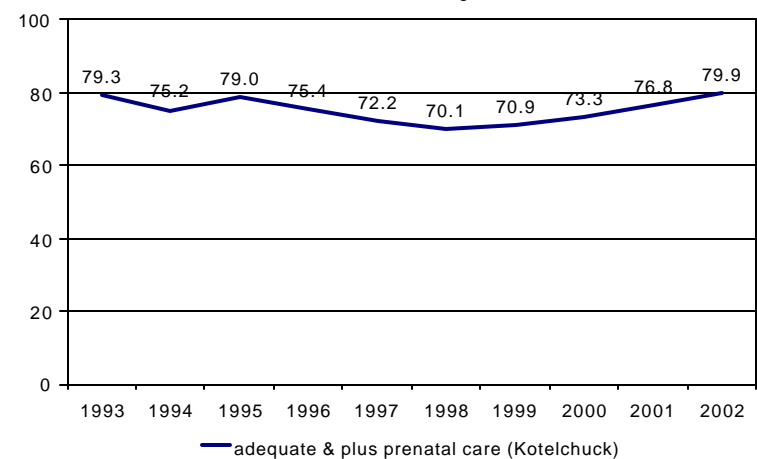
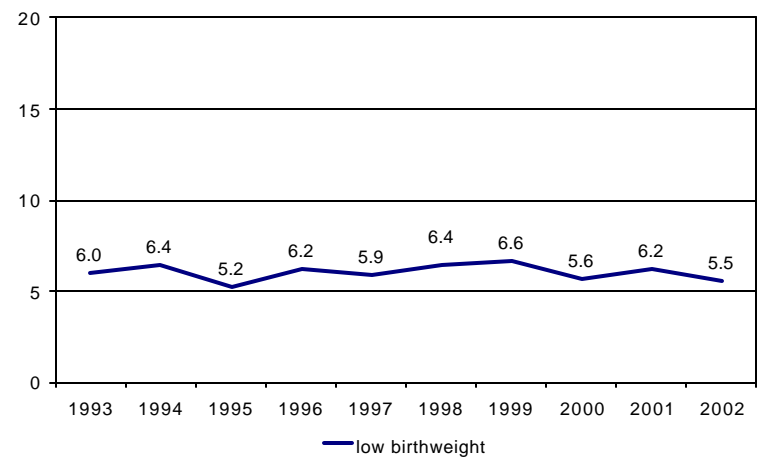
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,389	1,399	1,317	1,413	1,415	1,397	1,456	1,527	1,428	1,468
White	1,360	1,365	1,287	1,383	1,376	1,353	1,412	1,494	1,398	1,432
Black	15	23	17	16	22	25	17	13	14	14
American Indian	5	4	6	4	7	7	5	5	5	6
Asian & P.I.	8	7	7	9	10	9	14	9	11	15

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	11	0.8	18	1.3	16	1.2	20	1.4	13	0.9	23	1.6	14	1.0	16	1.0	25	1.8	16	1.1
1,500-2,499	72	5.2	71	5.1	53	4.0	67	4.7	70	4.9	66	4.7	82	5.6	70	4.6	63	4.4	65	4.4
Total < 2500	83	6.0	89	6.4	69	5.2	87	6.2	83	5.9	89	6.4	96	6.6	86	5.6	88	6.2	81	5.5
Preterm																				
Preterm < 37 weeks	126	9.1	121	8.6	129	9.8	135	9.6	135	9.5	137	9.8	115	7.9	148	9.7	151	10.6	138	9.4
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,102	79.3	1,052	75.2	1,041	79.0	1,066	75.4	1,021	72.2	979	70.1	1,033	70.9	1,120	73.3	1,096	76.8	1,173	79.9
Live Births to Teen Mothers																				
< 18	62	4.5	76	5.4	61	4.6	66	4.7	65	4.6	44	3.1	60	4.1	67	4.4	61	4.3	46	3.1
18-19	114	8.2	107	7.6	91	6.9	109	7.7	98	6.9	101	7.2	123	8.4	123	8.1	88	6.2	97	6.6
Total under 20	176	12.7	183	13.1	152	11.5	175	12.4	163	11.5	145	10.4	183	12.6	190	12.4	149	10.4	143	9.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	5	---	9	---	3	---	1	---	6	---	5	---	8	---	10	---	6	---
Infant deaths	11	7.9	7	5.0	11	8.4	9	6.4	9	6.4	15	10.7	9	6.2	9	5.9	13	9.1	9	6.1
Neonatal	4	---	5	---	10	7.6	6	4.2	4	---	9	6.4	5	---	6	3.9	12	8.4	6	4.1
Postneonatal	7	5.0	2	---	1	---	3	---	5	---	6	4.3	4	---	3	---	1	---	3	---
Age one to nine	4	---	3	---	3	---	3	---	2	---	6	---	4	---	2	---	4	---	3	---
Age ten to nineteen	8	---	12	---	6	---	12	---	5	---	8	---	9	---	7	---	6	---	12	---

*If number is less than 6, the rate is not calculated.

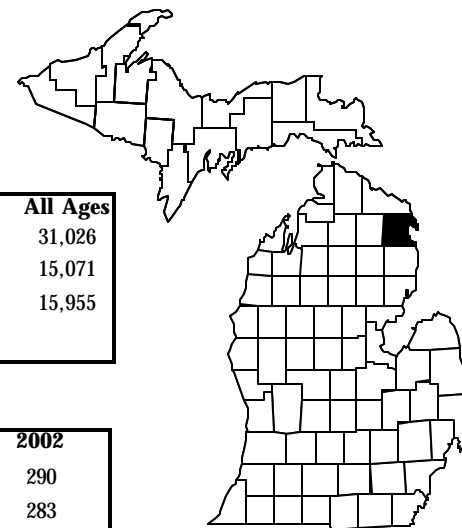
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Alpena County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	290	1,609	1,822	2,121	2,234	1,946	1,367	1,629	2,106	2,619	2,564	2,111	1,798	1,614	5,486	31,026
Male	156	657	921	1,058	1,160	1,001	702	796	1,018	1,304	1,277	1,074	912	767	2,268	15,071
Female	134	662	901	1,063	1,074	945	665	833	1,088	1,315	1,287	1,037	886	847	3,218	15,955
Race(%):	White (98.4)		Black (0.3)		Native American (0.4)		Asian/Pacific Islander (0.4)		Multiple Race (0.5)		Hispanic (0.6)					

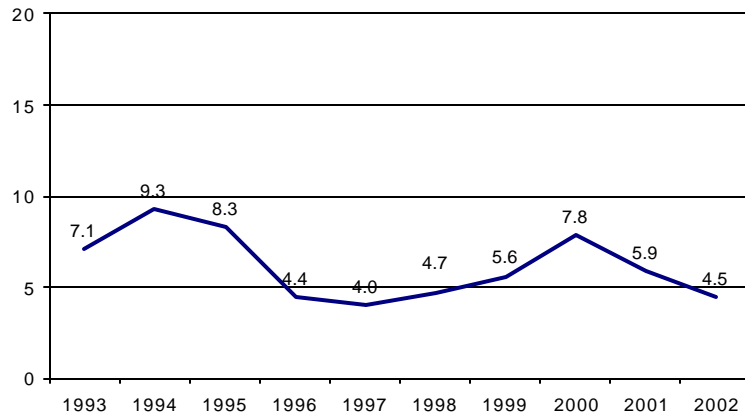
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	326	356	337	293	353	340	323	344	341	290
White	321	354	332	289	347	335	312	337	332	283
Black	1	---	1	1	---	---	2	1	1	---
American Indian	3	1	1	2	4	4	6	2	3	2
Asian & P.I.	---	1	2	1	1	1	3	4	5	5

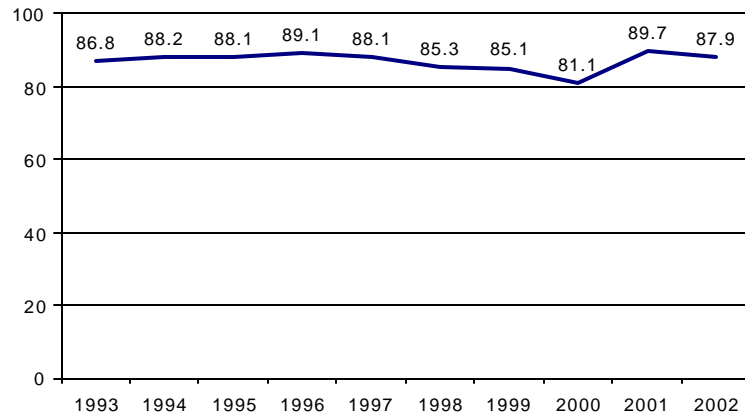
	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	1	---	2	---	1	---	2	---	5	---	7	2.2	9	2.6	3	---	1	---
1,500-2,499	19	5.8	32	9.0	26	7.7	12	4.1	12	3.4	11	3.2	11	3.4	18	5.2	17	5.0	12	4.1
Total < 2500	23	7.1	33	9.3	28	8.3	13	4.4	14	4.0	16	4.7	18	5.6	27	7.8	20	5.9	13	4.5
Preterm																				
Preterm < 37 weeks	28	8.6	49	13.8	38	11.3	19	6.5	24	6.8	35	10.3	46	14.2	40	11.6	40	11.7	30	10.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	283	86.8	314	88.2	297	88.1	261	89.1	311	88.1	290	85.3	275	85.1	279	81.1	306	89.7	255	87.9
Live Births to Teen Mothers																				
< 18	21	6.4	11	3.1	18	5.3	16	5.5	18	5.1	7	2.1	16	5.0	13	3.8	6	1.8	6	2.1
18-19	34	10.4	36	10.1	26	7.7	31	10.6	37	10.5	33	9.7	30	9.3	29	8.4	29	8.5	17	5.9
Total under 20	55	16.9	47	13.2	44	13.1	47	16.0	55	15.6	40	11.8	46	14.2	42	12.2	35	10.3	23	7.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	5	---	4	---	0	---	2	---	4	---	2	---	2	---	0	---	2	---
Infant deaths	4	---	1	---	1	---	3	---	2	---	4	---	7	21.7	2	---	1	---	1	---
Neonatal	3	---	0	---	1	---	2	---	2	---	3	---	6	18.6	2	---	1	---	0	---
Postneonatal	1	---	1	---	0	---	1	---	0	---	1	---	1	---	0	---	0	---	1	---
Age one to nine	3	---	0	---	1	---	2	---	1	---	0	---	3	---	0	---	2	---	0	---
Age ten to nineteen	6	---	1	---	1	---	2	---	1	---	3	---	4	---	2	---	3	---	2	---

*If number is less than 6, the rate is not calculated.

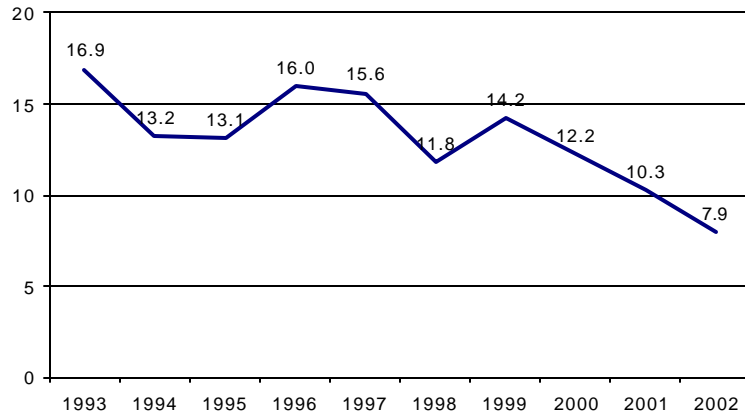
TRENDS (1993-2002)



— low birthweight



— adequate & plus prenatal care (Kotelchuck)

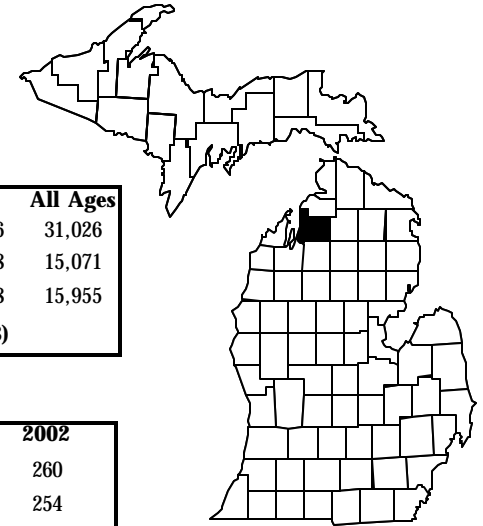


— live births to teen mothers <20

MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Antrim County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	290	1,609	1,822	2,121	2,234	1,946	1,367	1,629	2,106	2,619	2,564	2,111	1,798	1,614	5,486	31,026
Male	156	657	921	1,058	1,160	1,001	702	796	1,018	1,304	1,277	1,074	912	767	2,268	15,071
Female	134	662	901	1,063	1,074	945	665	833	1,088	1,315	1,287	1,037	886	847	3,218	15,955
Race (%):	White (97.4)		Black (0.3)		Native American (1.0)		Asian/Pacific Islander (0.3)		Multiple Race (0.9)		Hispanic (1.3)					

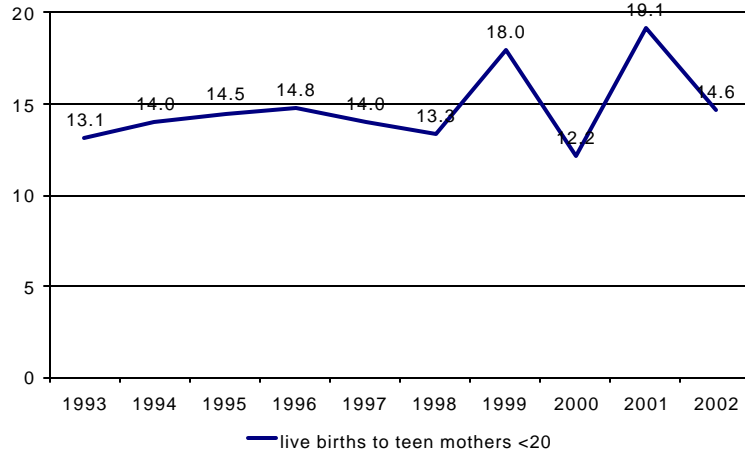
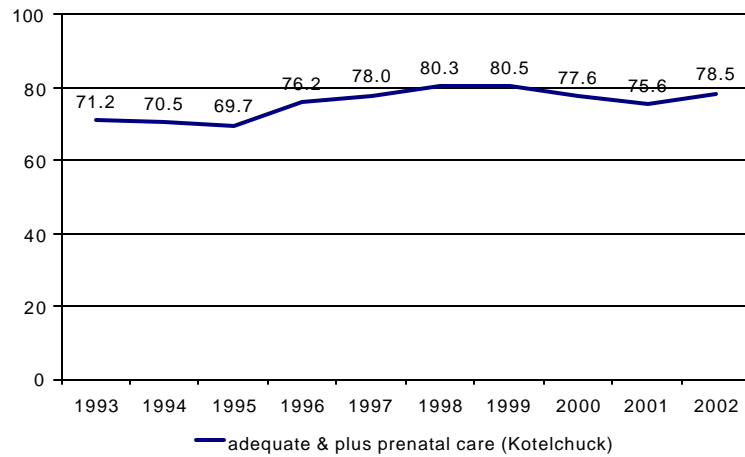
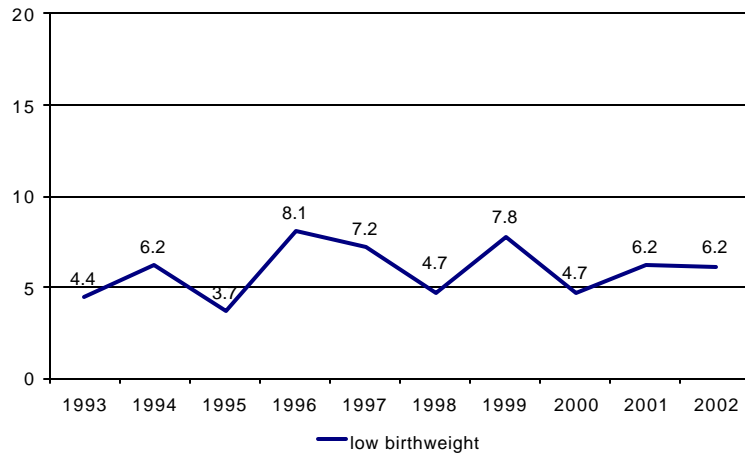
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	274	258	241	223	250	233	256	255	209	260
White	267	250	230	218	240	227	243	243	200	254
Black	---	---	---	---	1	---	2	3	1	1
American Indian	6	6	8	3	8	4	6	6	7	3
Asian & P.I.	---	1	2	1	1	2	2	1	---	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	2	---	1	---	1	---	3	---	1	---	4	---	4	---	3	---	3	---
1,500-2,499	10	3.6	14	5.4	8	3.3	17	7.6	15	6.0	10	4.3	16	6.3	8	3.1	10	4.8	13	5.0
Total < 2500	12	4.4	16	6.2	9	3.7	18	8.1	18	7.2	11	4.7	20	7.8	12	4.7	13	6.2	16	6.2
Preterm																				
Preterm < 37 weeks	18	6.6	25	9.7	13	5.4	26	11.7	22	8.8	29	12.4	24	9.4	19	7.5	27	12.9	29	11.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	195	71.2	182	70.5	168	69.7	170	76.2	195	78.0	187	80.3	206	80.5	198	77.6	158	75.6	204	78.5
Live Births to Teen Mothers																				
< 18	12	4.4	14	5.4	9	3.7	11	4.9	14	5.6	9	3.9	15	5.9	8	3.1	10	4.8	13	5.0
18-19	24	8.8	22	8.5	26	10.8	22	9.9	21	8.4	22	9.4	31	12.1	23	9.0	30	14.4	25	9.6
Total under 20	36	13.1	36	14.0	35	14.5	33	14.8	35	14.0	31	13.3	46	18.0	31	12.2	40	19.1	38	14.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	2	---	2	---	0	---	1	---	3	---	0	---	1	---	1	---	0	---
Infant deaths	2	---	2	---	1	---	3	---	2	---	0	---	2	---	2	---	2	---	1	---
Neonatal	0	---	1	---	0	---	2	---	2	---	0	---	1	---	2	---	2	---	0	---
Postneonatal	2	---	1	---	1	---	1	---	0	---	0	---	1	---	0	---	0	---	1	---
Age one to nine	0	---	2	---	2	---	2	---	4	---	0	---	0	---	1	---	0	---	0	---
Age ten to nineteen	1	---	1	---	1	---	1	---	1	---	0	---	0	---	0	---	2	---	0	---

*If number is less than 6, the rate is not calculated.

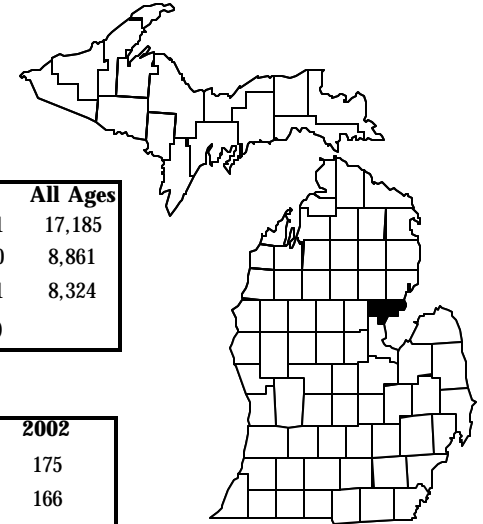
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Arenac County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	132	813	991	1,178	1,213	1,119	873	999	1,229	1,392	1,255	1,142	1,099	971	2,911	17,185
Male	60	349	544	605	627	609	494	532	647	755	651	569	557	492	1,370	8,861
Female	72	332	447	573	586	510	379	467	582	637	604	573	542	479	1,541	8,324
Race(%)	White (96.1)		Black (1.9)		Native American (0.9)		Asian/Pacific Islander (0.3)		Multiple Ethnicity(%)		Hispanic (1.3)					

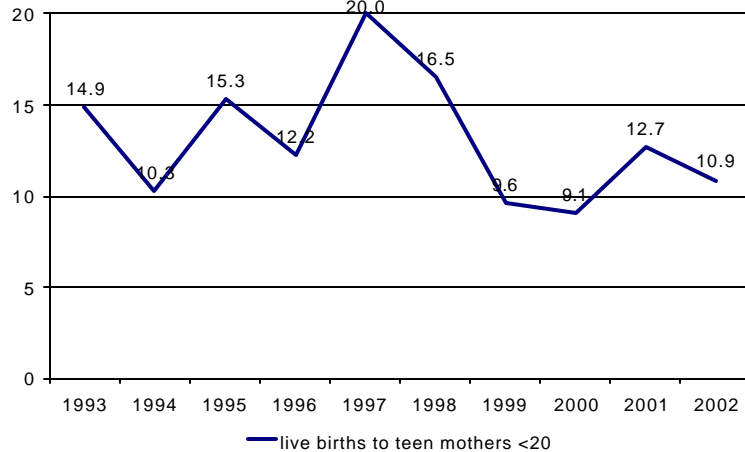
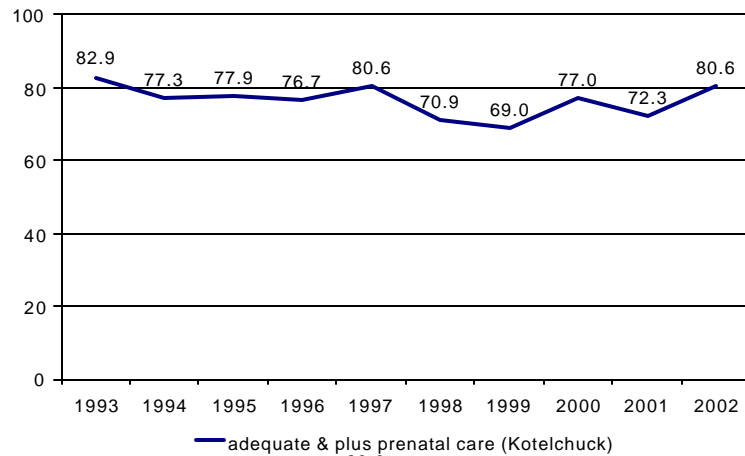
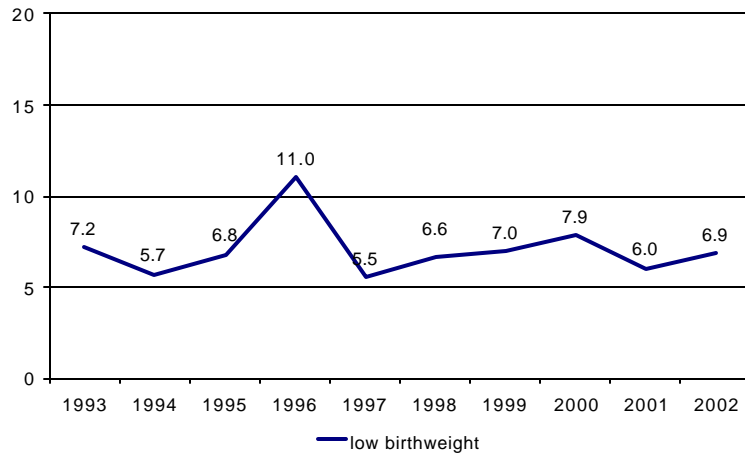
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	181	194	190	172	165	182	187	165	166	175
White	180	193	188	169	161	176	183	161	165	166
Black	1	---	---	---	1	---	---	---	---	1
American Indian	---	---	1	3	2	4	2	3	---	4
Asian & P.I.	---	---	1	---	1	2	1	1	1	3

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	2	---	2	---	2	---	1	---	3	---	1	---	1	---	1	---	2	---
1,500-2,499	12	6.6	9	4.6	11	5.8	17	9.9	8	4.8	9	4.9	12	6.4	12	7.3	9	5.4	10	5.7
Total < 2500	13	7.2	11	5.7	13	6.8	19	11.0	9	5.5	12	6.6	13	7.0	13	7.9	10	6.0	12	6.9
Preterm																				
Preterm < 37 weeks	21	11.6	20	10.3	15	7.9	17	9.9	12	7.3	21	11.5	10	5.3	23	13.9	24	14.5	12	6.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	150	82.9	150	77.3	148	77.9	132	76.7	133	80.6	129	70.9	129	69.0	127	77.0	120	72.3	141	80.6
Live Births to Teen Mothers																				
< 18	7	3.9	8	4.1	12	6.3	9	5.2	11	6.7	9	4.9	3	---	3	---	6	3.6	6	3.4
18-19	20	11.0	12	6.2	17	8.9	12	7.0	22	13.3	21	11.5	15	8.0	12	7.3	15	9.0	13	7.4
Total under 20	27	14.9	20	10.3	29	15.3	21	12.2	33	20.0	30	16.5	18	9.6	15	9.1	21	12.7	19	10.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	3	---	1	---	0	---	0	---	1	---	0	---	1	---	2	---	0	---
Infant deaths	2	---	2	---	1	---	2	---	1	---	2	---	0	---	1	---	1	---	1	---
Neonatal	0	---	2	---	0	---	0	---	0	---	1	---	0	---	1	---	1	---	0	---
Postneonatal	2	---	0	---	1	---	2	---	1	---	1	---	0	---	0	---	0	---	1	---
Age one to nine	1	---	0	---	0	---	0	---	0	---	1	---	0	---	1	---	0	---	0	---
Age ten to nineteen	2	---	1	---	1	---	1	---	0	---	2	---	0	---	1	---	1	---	3	---

*If number is less than 6, the rate is not calculated.

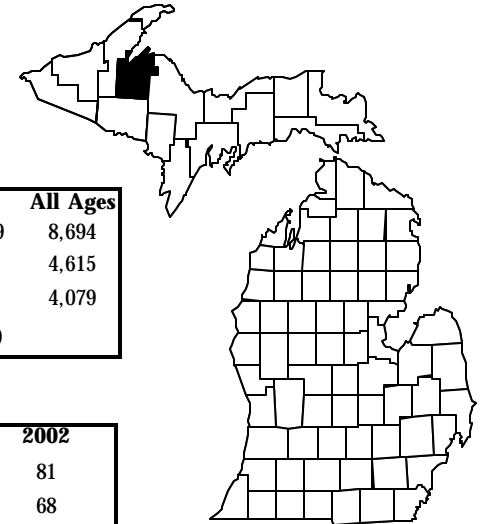
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Baraga County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	112	502	475	570	601	519	507	609	695	616	696	613	506	436	1,349	8,694
Male	52	194	219	289	319	320	335	363	427	353	354	341	247	234	568	4,615
Female	60	196	256	281	282	199	172	246	268	263	342	272	259	202	781	4,079
Race(%):	White(78.8)		Black (6.3)		Native American (11.6)		Asian/Pacific Islander (0.4)		Multiple Race(0.9)		Hispanic(0.9)					

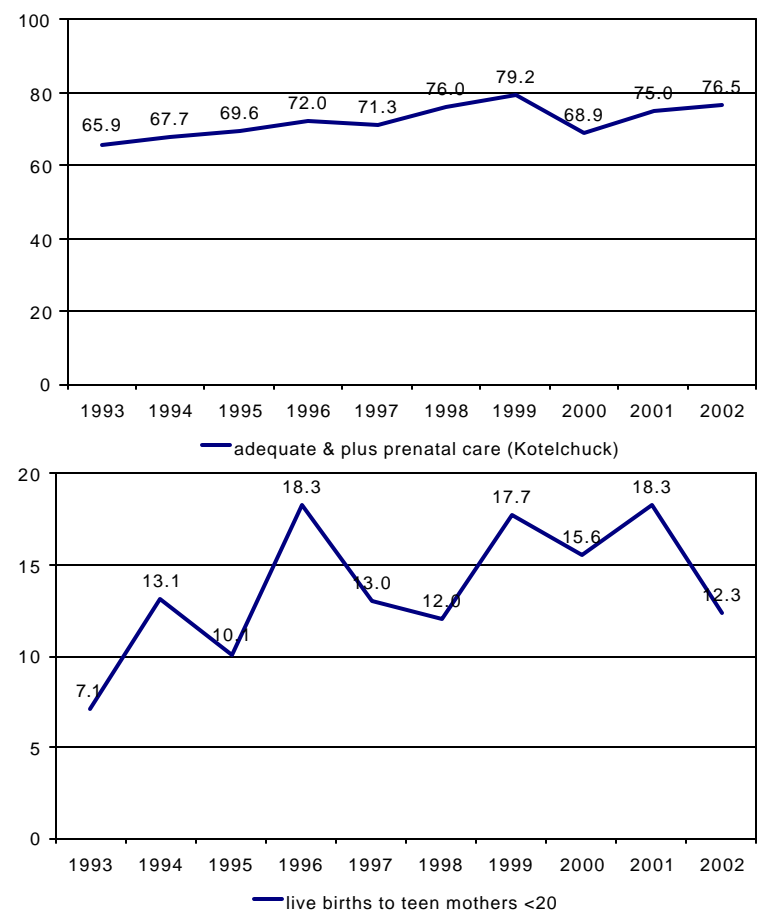
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	85	99	79	82	108	100	96	90	104	81
White	67	81	59	63	83	77	77	78	83	68
Black	---	---	---	---	---	---	---	---	---	---
American Indian	17	18	19	19	23	23	17	10	21	13
Asian & P.I.	---	---	1	---	2	---	2	1	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	0	---	2	---	0	---	0	---	1	---	0	---	0	---	1	---	4	---
1,500-2,499	3	---	6	6.1	2	---	5	---	3	---	6	6.0	3	---	2	---	4	---	5	---
Total < 2500	4	---	6	6.1	4	---	5	---	3	---	7	7.0	3	---	2	---	5	---	9	11.1
Preterm																				
Preterm < 37 weeks	8	9.4	7	7.1	6	7.6	5	---	8	7.4	10	10.0	9	9.4	6	6.7	11	10.6	10	12.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	56	65.9	67	67.7	55	69.6	59	72.0	77	71.3	76	76.0	76	79.2	62	68.9	78	75.0	62	76.5
Live Births to Teen Mothers																				
< 18	1	---	6	6.1	3	---	6	7.3	5	---	4	---	9	9.4	4	---	3	---	4	---
18-19	5	---	7	7.1	5	---	9	11.0	9	8.3	8	8.0	8	8.3	10	11.1	16	15.4	6	7.4
Total under 20	6	7.1	13	13.1	8	10.1	15	18.3	14	13.0	12	12.0	17	17.7	14	15.6	19	18.3	10	12.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---
Infant deaths	0	---	1	---	0	---	0	---	2	---	1	---	0	---	1	---	0	---	1	---
Neonatal	0	---	0	---	0	---	0	---	2	---	1	---	0	---	0	---	0	---	1	---
Postneonatal	0	---	1	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---
Age one to nine	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	0	---	0	---	2	---	1	---	1	---	0	---	1	---	0	---	0	---	0	---

*If number is less than 6, the rate is not calculated.

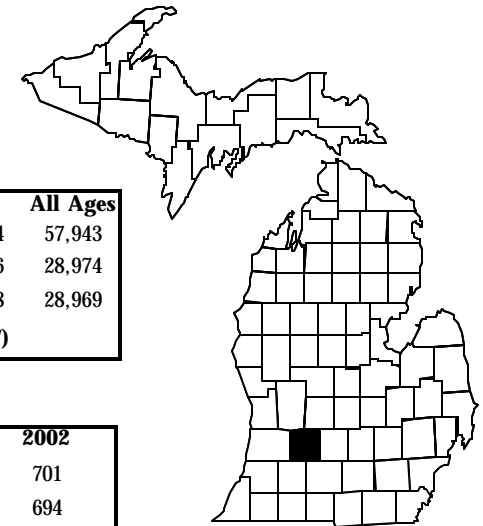
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Barry County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	683	3,595	4,044	4,596	4,363	3,590	3,000	3,806	4,382	4,895	4,683	4,118	3,377	2,700	6,794	57,943
Male	371	1,508	2,037	2,321	2,202	1,886	1,513	1,860	2,224	2,477	2,379	2,119	1,698	1,353	3,026	28,974
Female	312	1,404	2,007	2,275	2,161	1,704	1,487	1,946	2,158	2,418	2,304	1,999	1,679	1,347	3,768	28,969
Race(%):	White (97.8) Black (0.3) Native American (0.5) Asian/Pacific Islander (0.3) Multiple Ethnicity (1.1) Hispanic (1.7)															

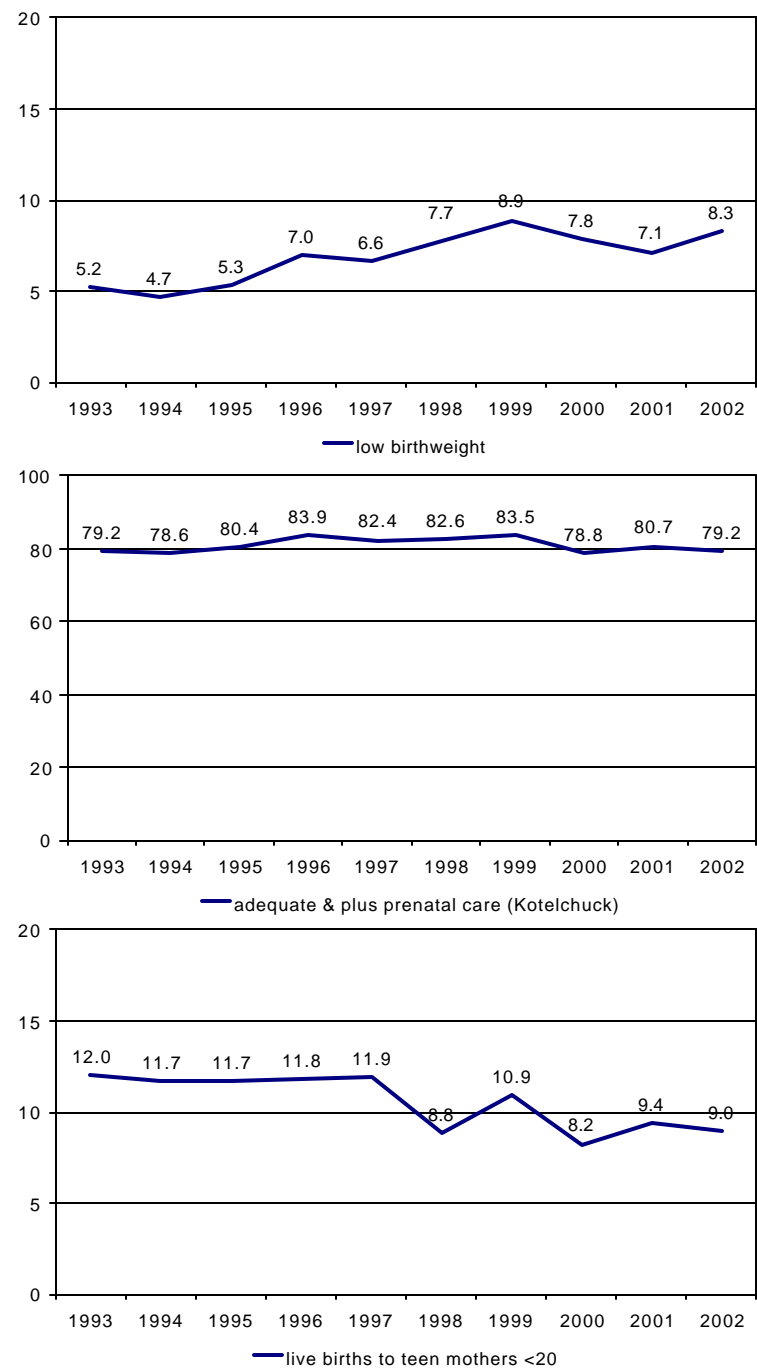
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	693	709	695	714	682	678	752	716	715	701
White	689	703	691	704	676	668	747	700	709	694
Black	---	1	---	2	3	3	2	5	3	4
American Indian	3	1	3	2	1	3	1	4	---	2
Asian & P.I.	1	3	1	6	2	3	2	5	3	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	8	1.2	6	0.8	3	---	5	---	5	---	11	1.6	9	1.2	15	2.1	5	---	12	1.7
1,500-2,499	28	4.0	27	3.8	34	4.9	45	6.3	40	5.9	41	6.0	58	7.7	41	5.7	46	6.4	46	6.6
Total < 2500	36	5.2	33	4.7	37	5.3	50	7.0	45	6.6	52	7.7	67	8.9	56	7.8	51	7.1	58	8.3
Preterm																				
Preterm < 37 weeks	54	7.8	56	7.9	68	9.8	77	10.8	63	9.2	74	10.9	80	10.6	92	12.8	65	9.1	97	13.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	549	79.2	557	78.6	559	80.4	599	83.9	562	82.4	560	82.6	628	83.5	564	78.8	577	80.7	555	79.2
Live Births to Teen Mothers																				
< 18	28	4.0	28	3.9	29	4.2	36	5.0	26	3.8	23	3.4	20	2.7	15	2.1	21	2.9	19	2.7
18-19	55	7.9	55	7.8	52	7.5	48	6.7	55	8.1	37	5.5	62	8.2	44	6.1	46	6.4	44	6.3
Total under 20	83	12.0	83	11.7	81	11.7	84	11.8	81	11.9	60	8.8	82	10.9	59	8.2	67	9.4	63	9.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	2	---	6	---	3	---	1	---	6	---	2	---	4	---	2	---	3	---
Infant deaths	8	11.5	5	---	3	---	2	---	9	13.2	6	8.8	6	8.0	6	8.4	3	---	1	---
Neonatal	4	---	4	---	2	---	2	---	6	8.8	3	---	2	---	2	---	3	---	1	---
Postneonatal	4	---	1	---	1	---	0	---	3	---	3	---	4	---	4	---	0	---	0	---
Age one to nine	3	---	0	---	4	---	3	---	3	---	4	---	3	---	1	---	3	---	0	---
Age ten to nineteen	3	---	5	---	3	---	2	---	3	---	5	---	6	---	6	---	8	---	6	---

*If number is less than 6, the rate is not calculated.

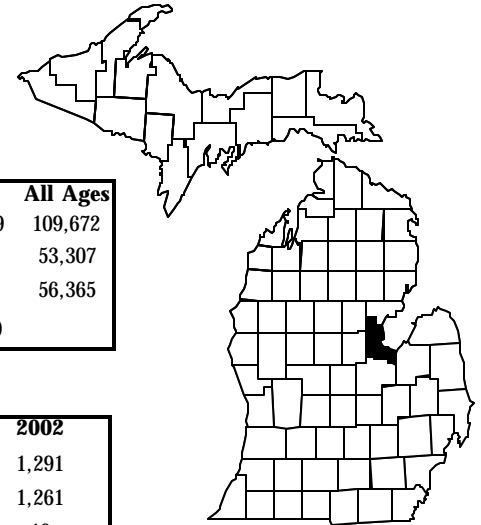
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Bay County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,273	6,497	7,020	7,925	7,295	7,047	5,829	6,810	7,715	9,031	8,763	8,008	6,429	5,054	16,249	109,672
Male	645	2,666	3,552	4,131	3,772	3,470	2,939	3,376	3,869	4,466	4,359	3,939	3,209	2,440	6,474	53,307
Female	628	2,558	3,468	3,794	3,523	3,577	2,890	3,434	3,846	4,565	4,404	4,069	3,220	2,614	9,775	56,365
Race(%):	White (96.4)		Black (1.4)		Native American (0.6)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (1.2)		Hispanic (4.0)					

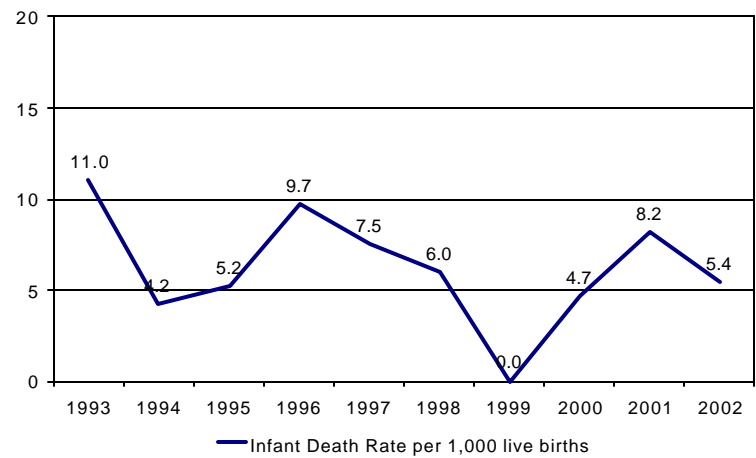
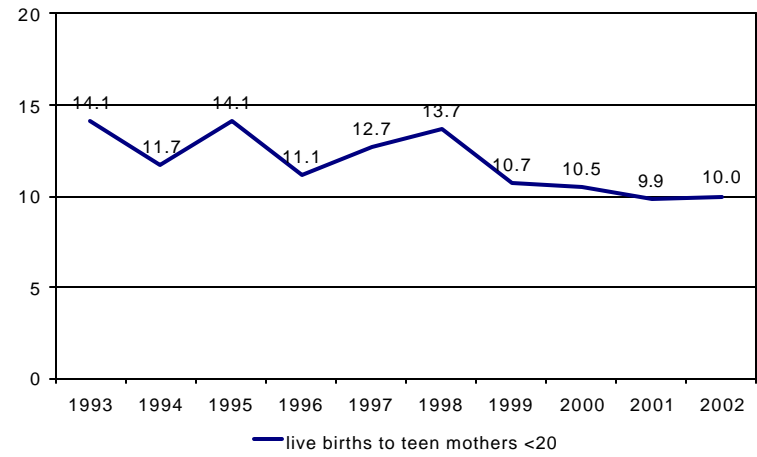
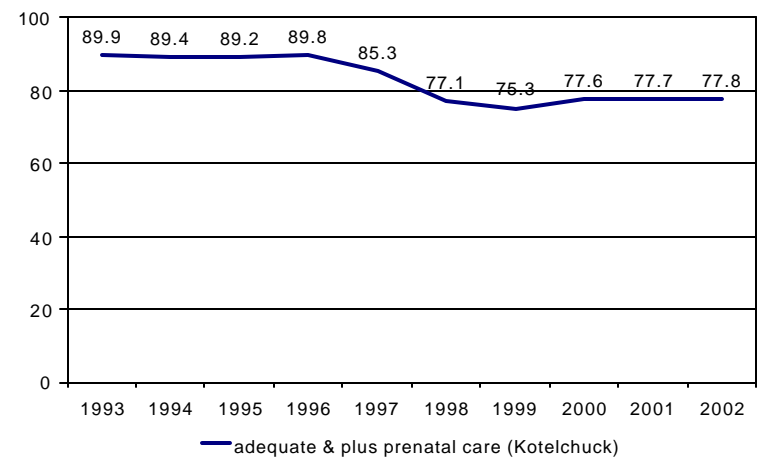
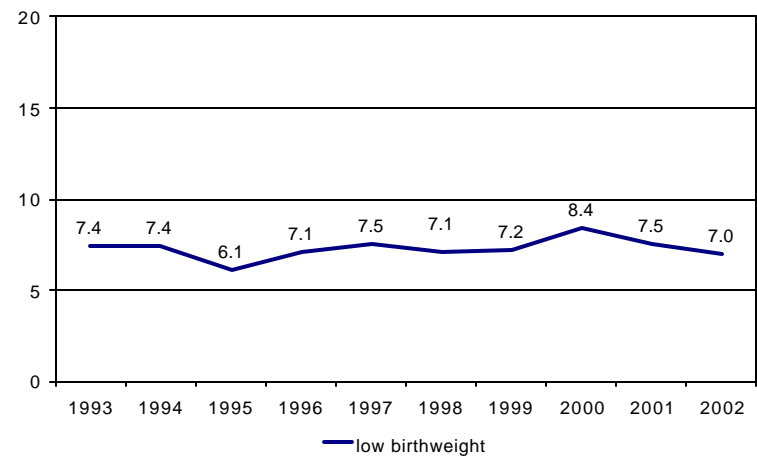
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,451	1,413	1,357	1,347	1,338	1,338	1,286	1,287	1,348	1,291
White	1,422	1,379	1,324	1,302	1,302	1,300	1,245	1,247	1,301	1,261
Black	23	23	19	24	18	18	15	24	26	19
American Indian	1	3	4	4	5	4	12	7	6	4
Asian & P.I.	4	8	10	17	10	13	11	6	13	6

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	19	1.3	12	0.8	16	1.2	20	1.5	15	1.1	23	1.7	19	1.5	17	1.3	26	1.9	19	1.5
1,500-2,499	89	6.1	93	6.6	67	4.9	75	5.6	86	6.4	72	5.4	74	5.8	91	7.1	75	5.6	71	5.5
Total < 2500	108	7.4	105	7.4	83	6.1	95	7.1	101	7.5	95	7.1	93	7.2	108	8.4	101	7.5	90	7.0
Preterm																				
Preterm < 37 weeks	150	10.3	145	10.3	126	9.3	141	10.5	147	11.0	126	9.4	143	11.1	127	9.9	134	9.9	134	10.4
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,305	89.9	1,263	89.4	1,210	89.2	1,209	89.8	1,141	85.3	1,032	77.1	968	75.3	999	77.6	1,047	77.7	1,004	77.8
Live Births to Teen Mothers																				
< 18	84	5.8	59	4.2	60	4.4	62	4.6	54	4.0	66	4.9	46	3.6	44	3.4	44	3.3	47	3.6
18-19	121	8.3	106	7.5	131	9.7	88	6.5	116	8.7	117	8.7	92	7.2	91	7.1	89	6.6	82	6.4
Total under 20	205	14.1	165	11.7	191	14.1	150	11.1	170	12.7	183	13.7	138	10.7	135	10.5	133	9.9	129	10.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	7	---	10	---	13	---	5	---	4	---	9	---	6	---	4	---	9	---	5	---
Infant deaths	16	11.0	6	4.2	7	5.2	13	9.7	10	7.5	8	6.0	4	---	6	4.7	11	8.2	7	5.4
Neonatal	12	8.3	3	---	5	---	9	6.7	6	4.5	5	---	4	---	5	---	10	7.4	6	4.6
Postneonatal	4	---	3	---	2	---	4	---	4	---	3	---	0	---	1	---	1	---	1	---
Age one to nine	7	---	2	---	9	---	2	---	0	---	3	---	4	---	1	---	4	---	1	---
Age ten to nineteen	8	---	8	---	7	---	7	---	5	---	5	---	9	---	9	---	8	---	4	---

*If number is less than 6, the rate is not calculated.

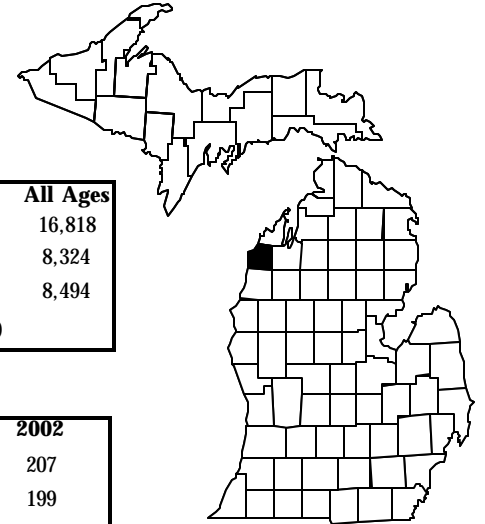
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Benzie County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	221	1,017	976	1,114	1,097	932	822	1,085	1,224	1,310	1,268	1,155	960	938	2,920	16,818
Male	107	399	502	583	554	467	411	573	609	658	607	592	485	456	1,321	8,324
Female	114	397	474	531	543	465	411	512	615	652	661	563	475	482	1,599	8,494
Race(%):	White (97.0)		Black (0.5)		Native American (1.5)		Asian/Pacific Islander (0.2)		Multiple Ethnicity (0.0)		Hispanic (1.4)					

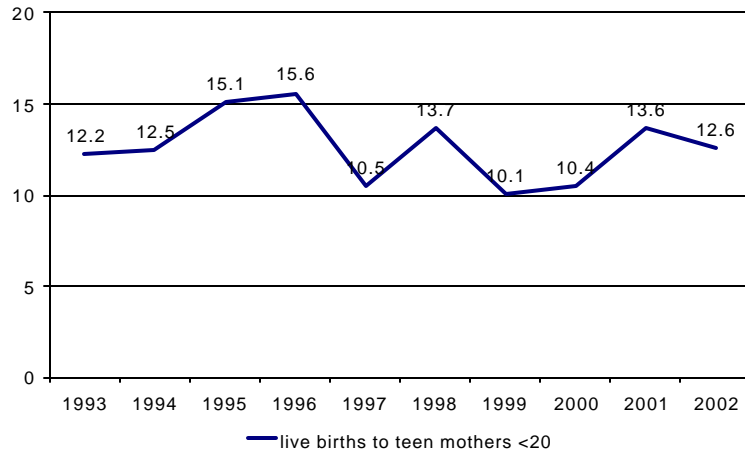
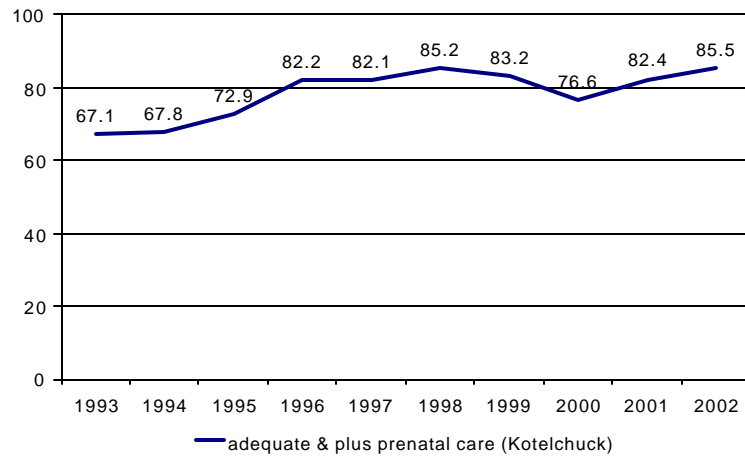
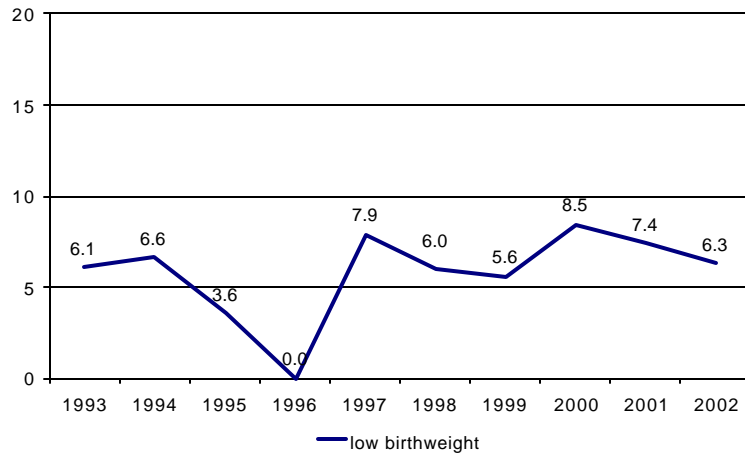
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	164	152	166	135	190	183	179	201	176	207
White	156	141	162	131	180	179	171	194	172	199
Black	2	2	---	1	1	---	1	---	1	3
American Indian	3	8	4	3	7	4	7	3	2	5
Asian & P.I.	2	---	---	---	---	---	---	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	2	---	0	---	1	---	3	---	1	---	3	---	5	---	3	---	0	---
1,500-2,499	9	5.5	8	5.3	6	3.6	3	---	12	6.3	10	5.5	7	3.9	12	6.0	10	5.7	13	6.3
Total < 2500	10	6.1	10	6.6	6	3.6	4	---	15	7.9	11	6.0	10	5.6	17	8.5	13	7.4	13	6.3
Preterm																				
Preterm < 37 weeks	6	3.7	13	8.6	15	9.0	13	9.6	21	11.1	16	8.7	18	10.1	24	11.9	17	9.7	18	8.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	110	67.1	103	67.8	121	72.9	111	82.2	156	82.1	156	85.2	149	83.2	154	76.6	145	82.4	177	85.5
Live Births to Teen Mothers																				
< 18	6	3.7	7	4.6	6	3.6	5	---	6	3.2	10	5.5	6	3.4	6	3.0	7	4.0	7	3.4
18-19	14	8.5	12	7.9	19	11.4	16	11.9	14	7.4	15	8.2	12	6.7	15	7.5	17	9.7	19	9.2
Total under 20	20	12.2	19	12.5	25	15.1	21	15.6	20	10.5	25	13.7	18	10.1	21	10.4	24	13.6	26	12.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	2	---	0	---	0	---	0	---	1	---	0	---	1	---	0	---	0	---
Infant deaths	0	---	1	---	0	---	0	---	1	---	0	---	2	---	0	---	0	---	0	---
Neonatal	0	---	0	---	0	---	0	---	1	---	0	---	1	---	0	---	0	---	0	---
Postneonatal	0	---	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---	0	---
Age one to nine	0	---	1	---	3	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---
Age ten to nineteen	1	---	1	---	3	---	2	---	2	---	0	---	0	---	3	---	0	---	0	---

*If number is less than 6, the rate is not calculated.

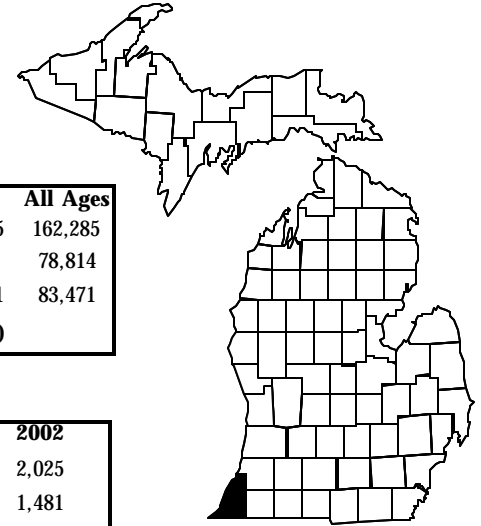
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Berrien County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	2,050	10,382	11,030	12,455	11,678	10,200	8,762	10,012	11,404	12,636	12,292	11,494	9,191	7,404	23,345	162,285
Male	1,060	4,352	5,702	6,482	5,981	5,004	4,238	4,817	5,522	6,257	5,961	5,688	4,403	3,643	9,704	78,814
Female	990	3,980	5,328	5,973	5,697	5,196	4,524	5,195	5,882	6,379	6,331	5,806	4,788	3,761	13,641	83,471
Race(%):	White (81.1)		Black (15.7)		Native American (0.4)		Asian/Pacific Islander (1.4)		Multiple Ethnicity (3.3)		Hispanic (3.3)					

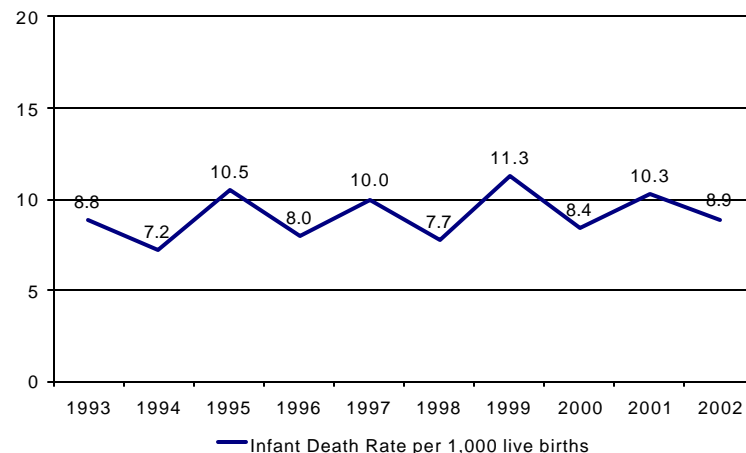
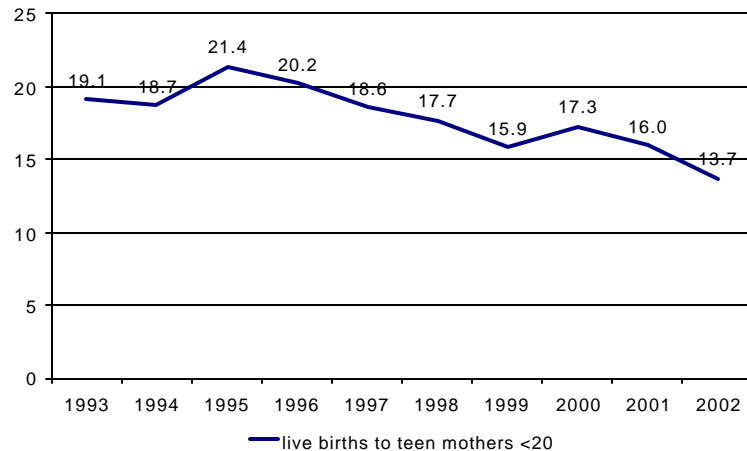
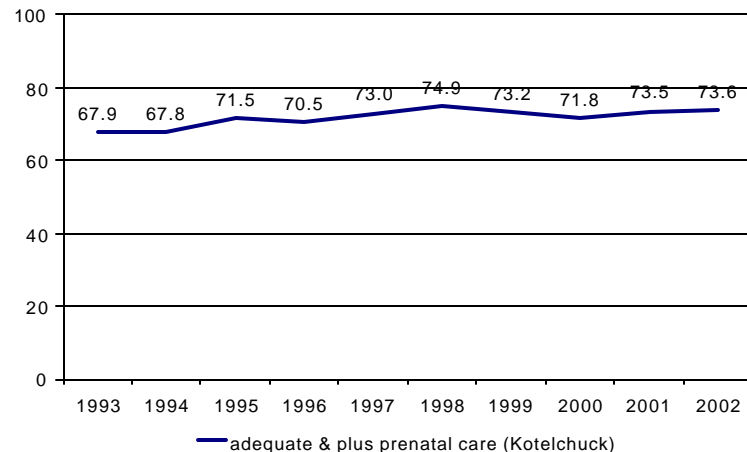
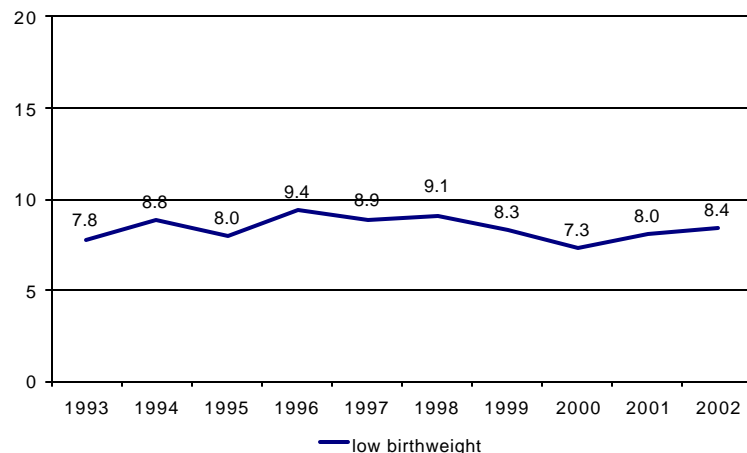
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	2,392	2,228	2,101	2,262	2,201	2,215	2,217	2,256	2,143	2,025
White	1,692	1,584	1,526	1,558	1,581	1,619	1,563	1,616	1,551	1,481
Black	670	611	546	655	588	555	610	594	548	498
American Indian	5	6	4	13	7	11	10	8	8	8
Asian & P.I.	22	19	19	34	25	23	32	35	33	35

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	39	1.6	23	1.0	31	1.5	48	2.1	45	2.0	40	1.8	47	2.1	39	1.7	37	1.7	31	1.5
1,500-2,499	148	6.2	174	7.8	137	6.5	165	7.3	150	6.8	162	7.3	136	6.1	126	5.6	135	6.3	139	6.9
Total < 2500	187	7.8	197	8.8	168	8.0	213	9.4	195	8.9	202	9.1	183	8.3	165	7.3	172	8.0	170	8.4
Preterm																				
Preterm < 37 weeks	268	11.2	240	10.8	212	10.1	260	11.5	241	10.9	236	10.7	268	12.1	261	11.6	267	12.5	224	11.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,624	67.9	1,511	67.8	1,502	71.5	1,595	70.5	1,606	73.0	1,659	74.9	1,623	73.2	1,620	71.8	1,576	73.5	1,491	73.6
Live Births to Teen Mothers																				
< 18	204	8.5	182	8.2	204	9.7	198	8.8	171	7.8	153	6.9	135	6.1	154	6.8	125	5.8	97	4.8
18-19	252	10.5	234	10.5	245	11.7	259	11.5	238	10.8	239	10.8	217	9.8	236	10.5	217	10.1	181	8.9
Total under 20	456	19.1	416	18.7	449	21.4	457	20.2	409	18.6	392	17.7	352	15.9	390	17.3	342	16.0	278	13.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	17	---	12	---	14	---	18	---	15	---	13	---	17	---	13	---	20	---	17	---
Infant deaths	21	8.8	16	7.2	22	10.5	18	8.0	22	10.0	17	7.7	25	11.3	19	8.4	22	10.3	18	8.9
Neonatal	11	4.6	9	4.0	12	5.7	13	5.7	18	8.2	10	4.5	12	5.4	13	5.8	14	6.5	8	4.0
Postneonatal	10	4.2	7	3.1	10	4.8	5	---	4	---	7	3.2	13	5.9	6	2.7	8	3.7	10	4.9
Age one to nine	6	---	13	---	7	---	9	---	8	---	5	---	12	---	3	---	8	---	3	---
Age ten to nineteen	16	---	18	---	25	---	15	---	21	---	12	---	7	---	16	---	8	---	10	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		4.1	2.1	2.0	Maternal health/prematurity
1500g+	Fetal	2.3	1.1	1.2	Maternal care
	Neonatal	1.5	1.2	0.3	Newborn care
	Postneonatal	3.6	1.0	2.6	Infant health
Total		11.5	5.4	6.1	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

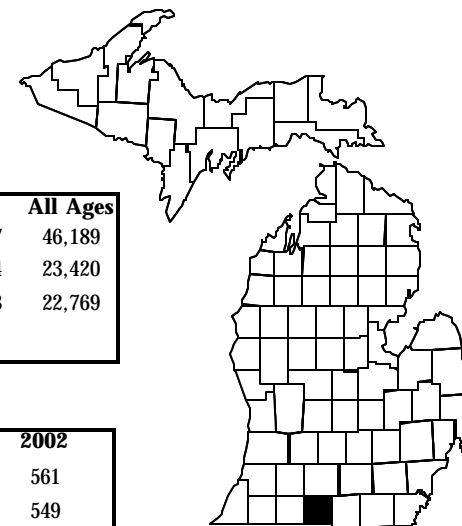
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Branch County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	511	2,763	2,952	3,375	3,331	3,083	2,781	3,278	3,617	3,828	3,464	3,008	2,459	2,123	6,127	46,189
Male	257	1,178	1,522	1,721	1,747	1,667	1,475	1,727	1,829	1,988	1,778	1,555	1,253	1,079	2,644	23,420
Female	254	1,074	1,430	1,654	1,584	1,416	1,306	1,551	1,788	1,840	1,686	1,453	1,206	1,044	3,483	22,769
Race(%):	White (95.2)		Black (2.9)		Native American (0.5)		Asian/Pacific Islander (0.5)		Multiple Race (0.9)		Hispanic (3.1)					

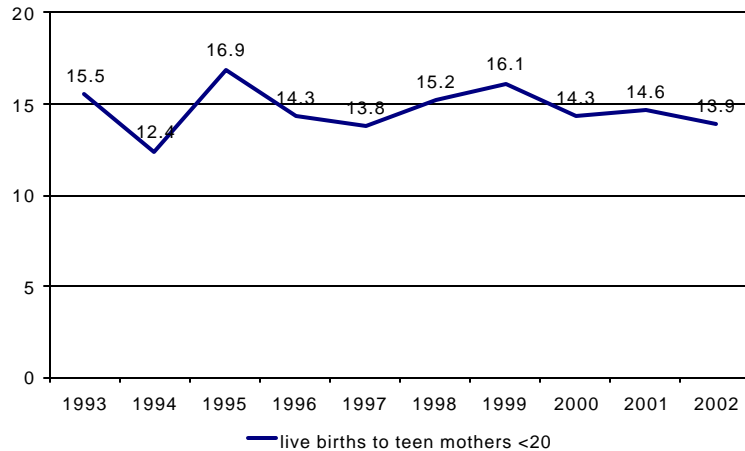
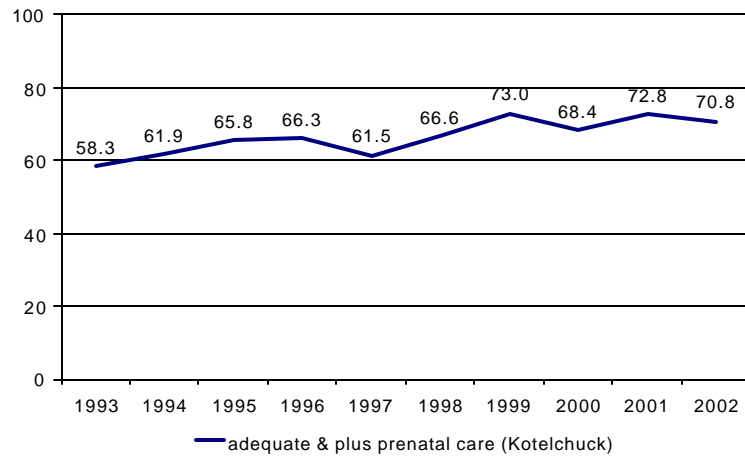
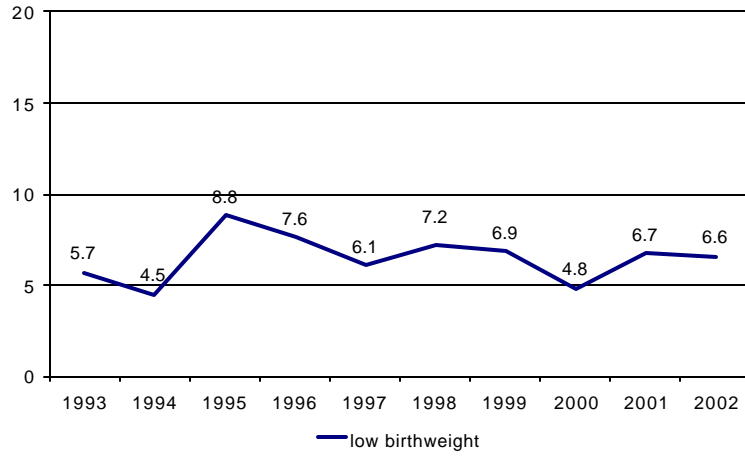
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	576	507	532	525	507	554	533	623	581	561
White	567	501	525	517	500	539	525	615	576	549
Black	5	1	1	1	3	7	2	3	---	3
American Indian	1	1	1	---	1	1	---	1	1	1
Asian & P.I.	2	3	1	4	3	6	6	3	4	5

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	8	1.6	10	1.9	8	1.5	9	1.8	4	---	9	1.7	5	---	8	1.4	7	1.2
1,500-2,499	29	5.0	15	3.0	37	7.0	32	6.1	22	4.3	36	6.5	28	5.3	25	4.0	31	5.3	30	5.3
Total < 2500	33	5.7	23	4.5	47	8.8	40	7.6	31	6.1	40	7.2	37	6.9	30	4.8	39	6.7	37	6.6
Preterm																				
Preterm < 37 weeks	42	7.3	36	7.1	51	9.6	49	9.3	45	8.9	53	9.6	54	10.1	56	9.0	43	7.4	57	10.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	336	58.3	314	61.9	350	65.8	348	66.3	312	61.5	369	66.6	389	73.0	426	68.4	423	72.8	397	70.8
Live Births to Teen Mothers																				
< 18	35	6.1	19	3.7	22	4.1	25	4.8	19	3.7	32	5.8	28	5.3	31	5.0	23	4.0	31	5.5
18-19	54	9.4	44	8.7	68	12.8	50	9.5	51	10.1	52	9.4	58	10.9	58	9.3	62	10.7	47	8.4
Total under 20	89	15.5	63	12.4	90	16.9	75	14.3	70	13.8	84	15.2	86	16.1	89	14.3	85	14.6	78	13.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	4	---	4	---	4	---	2	---	2	---	4	---	3	---	2	---	2	---	0	---
Infant deaths	8	13.9	5	---	1	---	5	---	4	---	3	---	4	---	4	---	8	13.8	4	---
Neonatal	1	---	1	---	1	---	5	---	3	---	2	---	3	---	3	---	4	---	3	---
Postneonatal	7	12.2	4	---	0	---	0	---	1	---	1	---	1	---	1	---	4	---	1	---
Age one to nine	3	---	3	---	2	---	1	---	2	---	1	---	3	---	1	---	0	---	2	---
Age ten to nineteen	2	---	1	---	3	---	3	---	0	---	6	---	3	---	2	---	5	---	3	---

*If number is less than 6, the rate is not calculated.

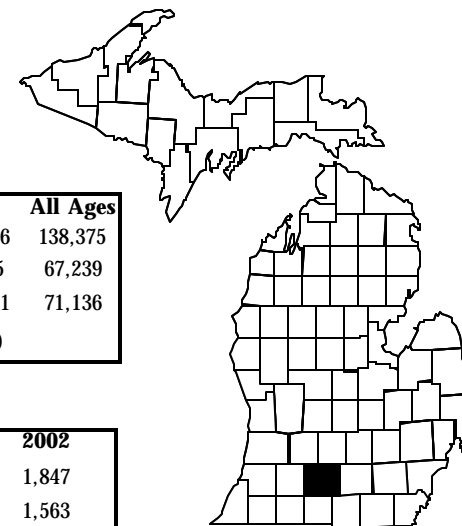
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Calhoun County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,805	8,897	9,602	10,599	10,184	9,248	7,897	9,285	9,768	10,579	10,324	9,648	7,456	5,972	18,916	138,375
Male	899	3,561	4,882	5,473	5,343	4,465	3,882	4,588	4,813	5,214	5,119	4,808	3,643	2,854	7,695	67,239
Female	906	3,531	4,720	5,126	4,841	4,783	4,015	4,697	4,955	5,365	5,205	4,840	3,813	3,118	11,221	71,136
Race(%):	White (85.5)		Black (11.0)		Native American (0.6)		Asian/Pacific Islander (1.1)		Multiple Ethnicity (0.5)		Hispanic (3.2)					

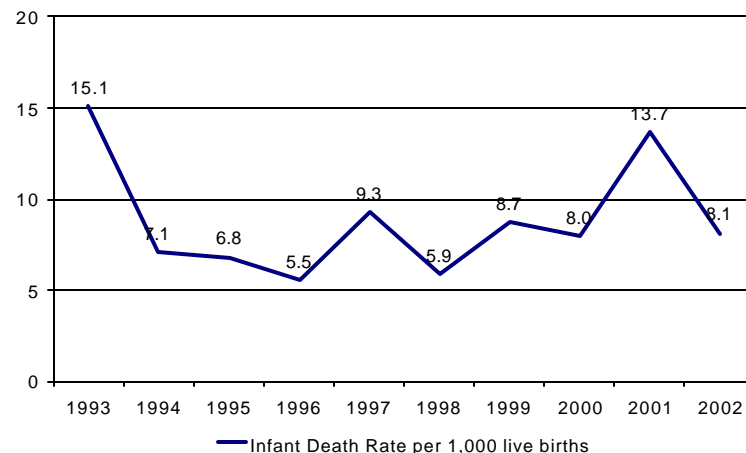
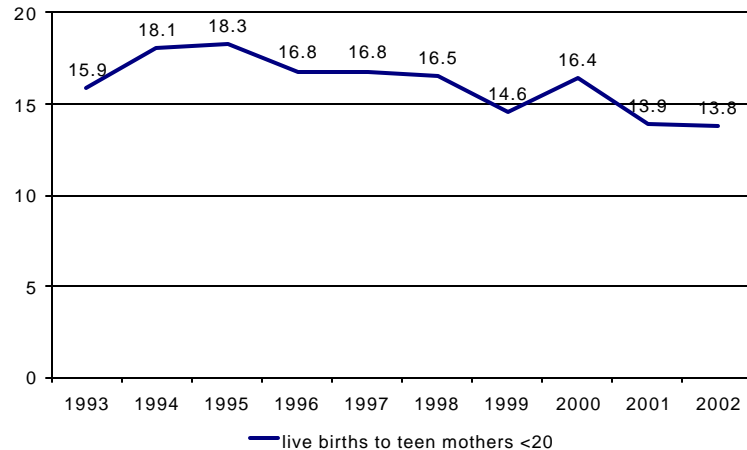
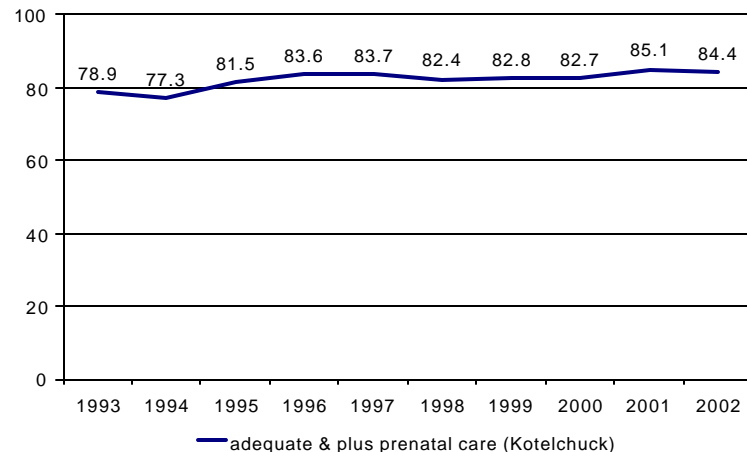
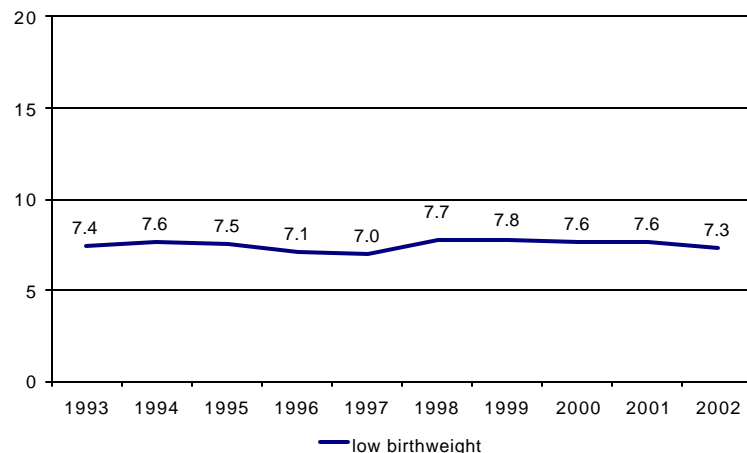
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,921	1,969	1,909	1,834	1,825	1,860	1,840	1,875	1,901	1,847
White	1,585	1,647	1,581	1,544	1,537	1,579	1,539	1,565	1,610	1,563
Black	301	287	303	245	257	240	260	263	242	256
American Indian	9	6	5	5	3	8	4	12	5	3
Asian & P.I.	22	26	17	36	27	31	35	34	39	22

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	31	1.6	22	1.1	17	0.9	20	1.1	23	1.3	18	1.0	25	1.4	33	1.8	32	1.7	25	1.4
1,500-2,499	112	5.8	127	6.4	126	6.6	111	6.1	104	5.7	125	6.7	119	6.5	110	5.9	113	5.9	110	6.0
Total < 2500	143	7.4	149	7.6	143	7.5	131	7.1	127	7.0	143	7.7	144	7.8	143	7.6	145	7.6	135	7.3
Preterm																				
Preterm < 37 weeks	197	10.3	189	9.6	179	9.4	170	9.3	146	8.0	158	8.5	196	10.7	184	9.8	211	11.1	161	8.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,516	78.9	1,522	77.3	1,555	81.5	1,533	83.6	1,527	83.7	1,532	82.4	1,524	82.8	1,550	82.7	1,618	85.1	1,558	84.4
Live Births to Teen Mothers																				
< 18	130	6.8	140	7.1	153	8.0	137	7.5	122	6.7	101	5.4	88	4.8	117	6.2	94	4.9	88	4.8
18-19	175	9.1	216	11.0	197	10.3	172	9.4	184	10.1	206	11.1	180	9.8	191	10.2	170	8.9	167	9.0
Total under 20	305	15.9	356	18.1	350	18.3	309	16.8	306	16.8	307	16.5	268	14.6	308	16.4	264	13.9	255	13.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	10	---	6	---	15	---	7	---	3	---	7	---	7	---	21	---	20	---	25	---
Infant deaths	29	15.1	14	7.1	13	6.8	10	5.5	17	9.3	11	5.9	16	8.7	15	8.0	26	13.7	15	8.1
Neonatal	17	8.8	8	4.1	8	4.2	2	---	6	3.3	9	4.8	7	3.8	13	6.9	18	9.5	8	4.3
Postneonatal	12	6.2	6	3.0	5	---	8	4.4	11	6.0	2	---	9	4.9	2	---	8	4.2	7	3.8
Age one to nine	5	---	6	---	6	---	5	---	17	---	5	---	2	---	7	---	5	---	7	---
Age ten to nineteen	9	---	10	---	7	---	13	---	18	---	7	---	8	---	9	---	9	---	8	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		4.4	2.1	2.3	Maternal health/prematurity
1500g+	Fetal	2.7	1.1	1.6	Maternal care
	Neonatal	1.0	1.2	(-0.2)	Newborn care
	Postneonatal	2.6	1.0	1.6	Infant health
Total		10.7	5.4	5.3	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

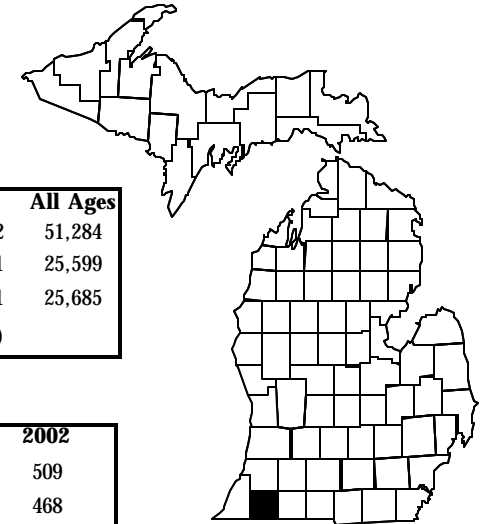
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Cass County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	510	2,857	3,344	3,849	3,795	3,120	2,545	3,115	3,750	4,068	4,139	3,855	3,293	2,582	6,972	51,284
Male	262	1,198	1,706	2,016	1,999	1,581	1,287	1,592	1,857	2,055	2,103	1,866	1,633	1,303	3,141	25,599
Female	248	1,149	1,638	1,833	1,796	1,539	1,258	1,523	1,893	2,013	2,036	1,989	1,660	1,279	3,831	25,685
Race(%):	White (91.0)		Black (5.9)		Native American (0.8)		Asian/Pacific Islander (0.6)		Multiple Ethnicity (0.7)		Hispanic (2.3)					

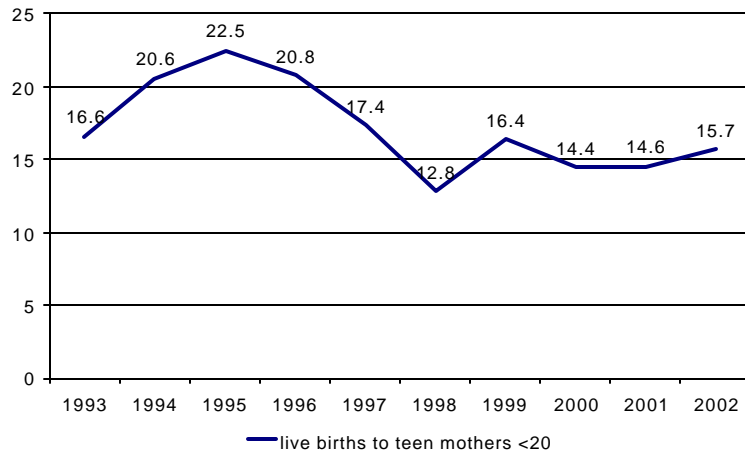
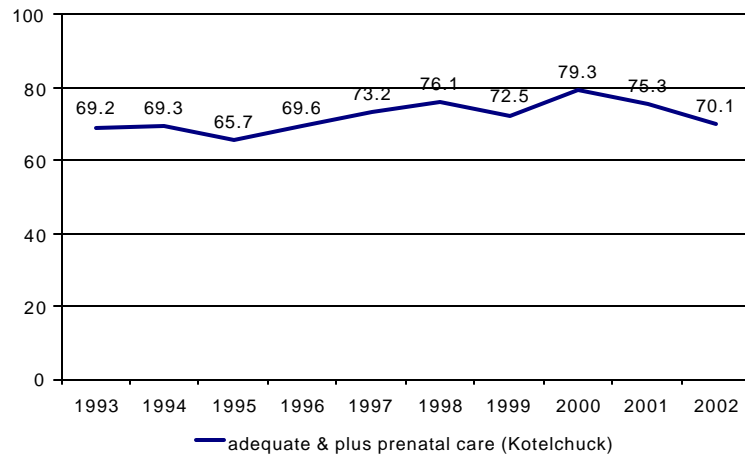
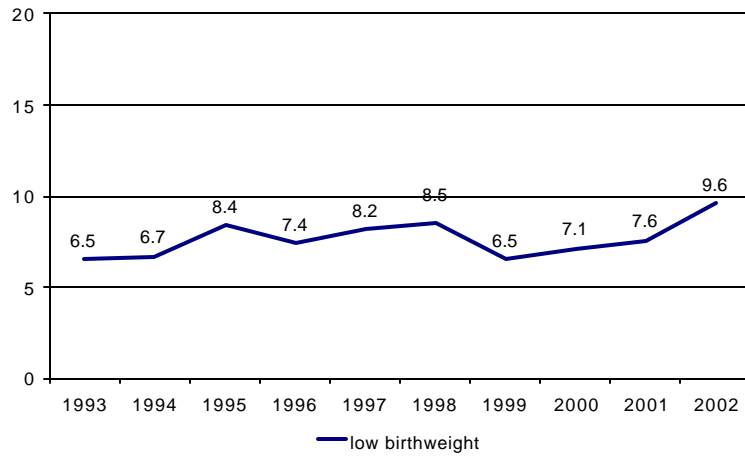
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	572	554	466	578	523	577	542	561	515	509
White	490	499	410	513	467	506	493	511	450	468
Black	69	51	48	53	44	56	37	45	51	33
American Indian	5	2	4	4	4	10	7	2	6	3
Asian & P.I.	6	2	3	7	8	5	3	2	8	4

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	1.0	10	1.8	6	1.3	6	1.0	11	2.1	6	1.0	7	1.3	8	1.4	10	1.9	9	1.8
1,500-2,499	31	5.4	27	4.9	33	7.1	37	6.4	32	6.1	43	7.5	28	5.2	32	5.7	29	5.6	40	7.9
Total < 2500	37	6.5	37	6.7	39	8.4	43	7.4	43	8.2	49	8.5	35	6.5	40	7.1	39	7.6	49	9.6
Preterm																				
Preterm < 37 weeks	55	9.6	46	8.3	49	10.5	67	11.6	52	9.9	64	11.1	51	9.4	54	9.6	59	11.5	66	13.0
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	396	69.2	384	69.3	306	65.7	402	69.6	383	73.2	439	76.1	393	72.5	445	79.3	388	75.3	357	70.1
Live Births to Teen Mothers																				
< 18	30	5.2	47	8.5	49	10.5	50	8.7	36	6.9	23	4.0	29	5.4	28	5.0	23	4.5	23	4.5
18-19	65	11.4	67	12.1	56	12.0	70	12.1	55	10.5	51	8.8	60	11.1	53	9.4	52	10.1	57	11.2
Total under 20	95	16.6	114	20.6	105	22.5	120	20.8	91	17.4	74	12.8	89	16.4	81	14.4	75	14.6	80	15.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	8	---	5	---	3	---	2	---	1	---	3	---	3	---	8	---	2	---	6	---
Infant deaths	11	19.2	8	14.4	5	---	1	---	6	11.5	2	---	3	---	4	---	1	---	7	13.8
Neonatal	5	---	5	---	3	---	1	---	4	---	1	---	2	---	1	---	0	---	3	---
Postneonatal	6	10.5	3	---	2	---	0	---	2	---	1	---	1	---	3	---	1	---	4	---
Age one to nine	2	---	0	---	2	---	3	---	2	---	2	---	2	---	3	---	1	---	2	---
Age ten to nineteen	3	---	11	---	4	---	5	---	4	---	8	---	0	---	4	---	2	---	4	---

*If number is less than 6, the rate is not calculated.

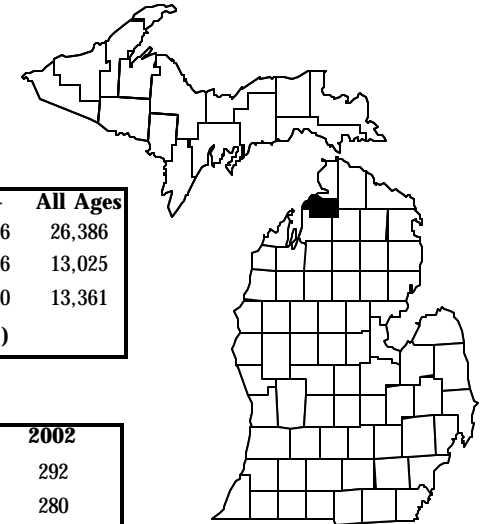
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Charlevoix County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	294	1,557	1,789	1,992	1,893	1,376	1,227	1,640	1,880	2,116	2,140	1,791	1,619	1,380	3,986	26,386
Male	160	635	934	1,044	983	686	599	807	954	1,056	1,065	867	784	705	1,746	13,025
Female	134	628	855	948	910	690	628	833	926	1,060	1,075	924	835	675	2,240	13,361
Race(%):	White (96.4)		Black (0.3)		Native American (1.7)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (0.1)		Ethnicity(%):		Hispanic (1.1)			

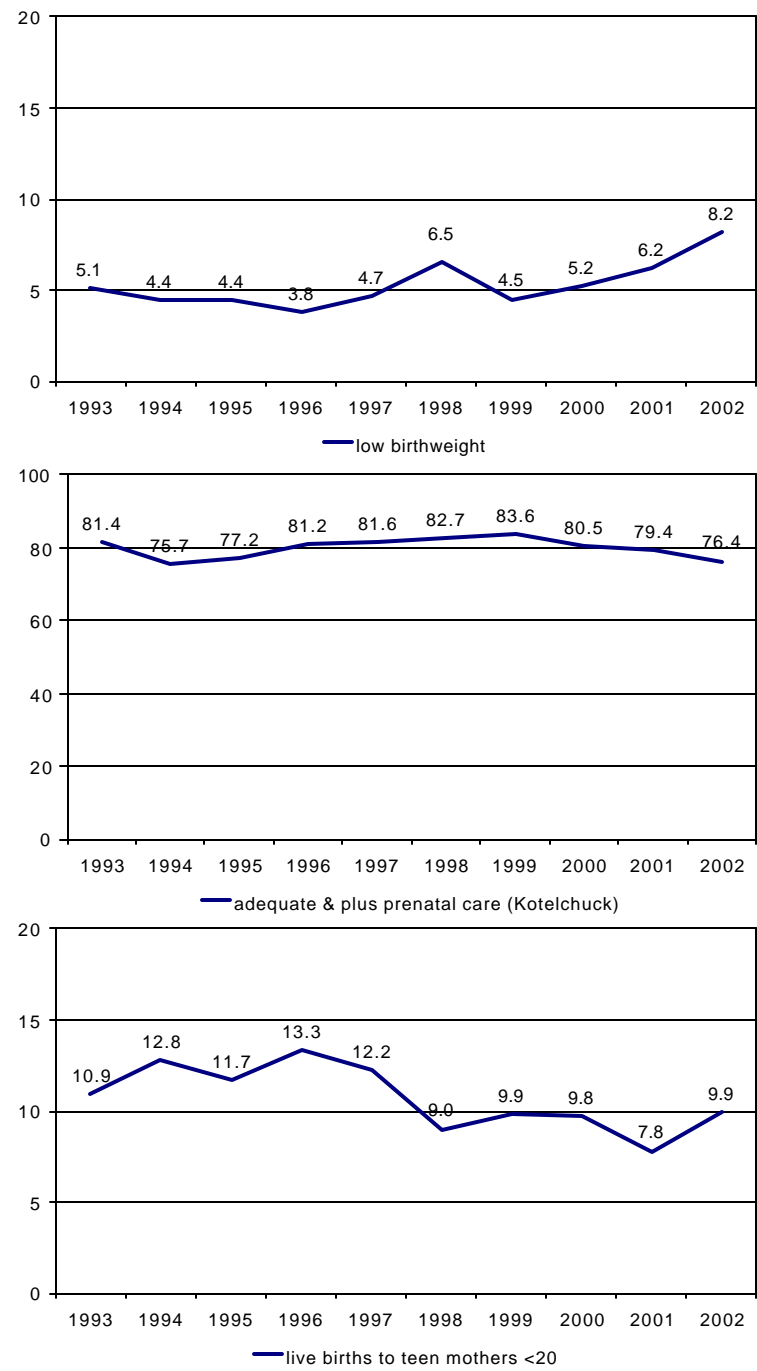
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	311	321	298	345	320	324	335	287	321	292
White	301	309	278	330	312	311	325	273	315	280
Black	---	---	5	4	---	2	---	1	1	4
American Indian	7	9	9	7	7	7	7	9	4	5
Asian & P.I.	3	3	5	4	1	4	2	3	1	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	2	---	3	---	1	---	6	1.9	4	---	2	---	4	---	2	---	8	2.7
1,500-2,499	16	5.1	12	3.7	10	3.4	12	3.5	9	2.8	17	5.2	13	3.9	11	3.8	18	5.6	16	5.5
Total < 2500	16	5.1	14	4.4	13	4.4	13	3.8	15	4.7	21	6.5	15	4.5	15	5.2	20	6.2	24	8.2
Preterm																				
Preterm < 37 weeks	29	9.3	21	6.5	22	7.4	24	7.0	30	9.4	29	9.0	18	5.4	26	9.1	25	7.8	36	12.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	253	81.4	243	75.7	230	77.2	280	81.2	261	81.6	268	82.7	280	83.6	231	80.5	255	79.4	223	76.4
Live Births to Teen Mothers																				
< 18	7	2.3	13	4.0	12	4.0	15	4.3	14	4.4	11	3.4	11	3.3	4	---	4	---	9	3.1
18-19	27	8.7	28	8.7	23	7.7	31	9.0	25	7.8	18	5.6	22	6.6	24	8.4	21	6.5	20	6.8
Total under 20	34	10.9	41	12.8	35	11.7	46	13.3	39	12.2	29	9.0	33	9.9	28	9.8	25	7.8	29	9.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	4	---	1	---	3	---	6	---	0	---	1	---	3	---	4	---	1	---	1	---
Infant deaths	2	---	1	---	2	---	1	---	5	---	2	---	1	---	2	---	2	---	2	---
Neonatal	1	---	1	---	2	---	1	---	5	---	1	---	1	---	2	---	1	---	2	---
Postneonatal	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---	1	---	0	---
Age one to nine	0	---	0	---	1	---	4	---	0	---	2	---	2	---	0	---	0	---	1	---
Age ten to nineteen	1	---	5	---	4	---	4	---	1	---	2	---	3	---	3	---	2	---	2	---

*If number is less than 6, the rate is not calculated.

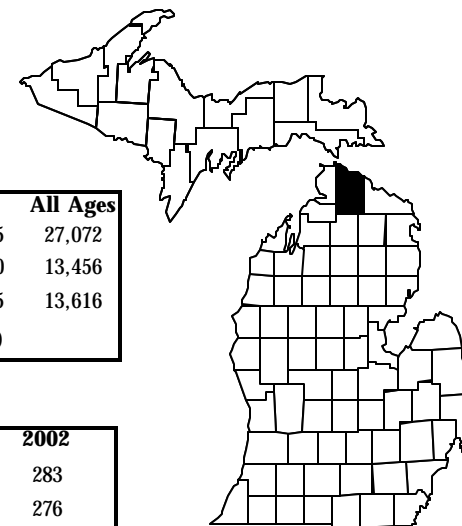
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Cheboygan County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	251	1,436	1,702	1,827	1,840	1,476	1,368	1,700	1,775	1,990	2,056	1,761	1,688	1,638	4,815	27,072
Male	129	607	868	919	974	765	657	864	926	993	1,011	837	836	780	2,290	13,456
Female	122	578	834	908	866	711	711	836	849	997	1,045	924	852	858	2,525	13,616
Race(%):	White (95.2)		Black (0.4)		Native American (2.4)		Asian/Pacific Islander (0.2)		Multiple Ethnicity (0.7)		Ethnicity(%):		Hispanic (0.8)			

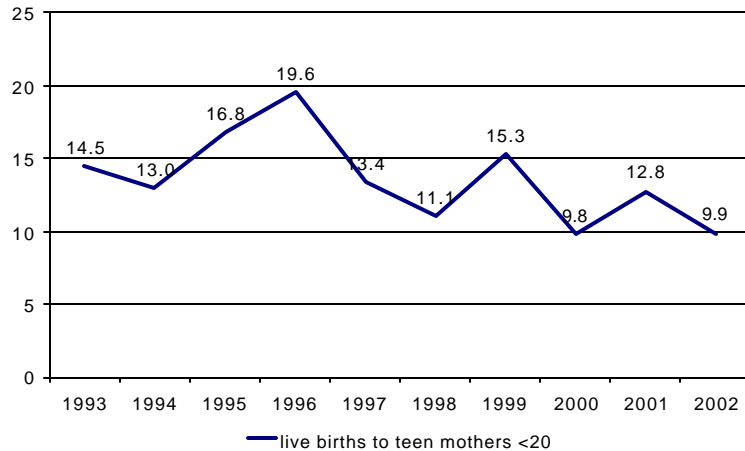
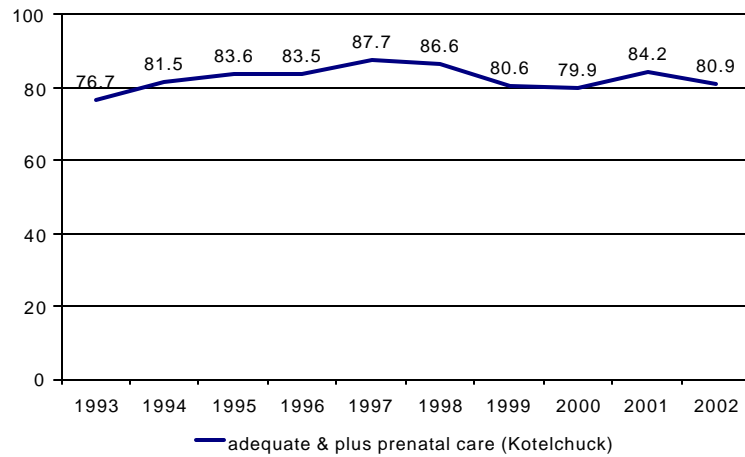
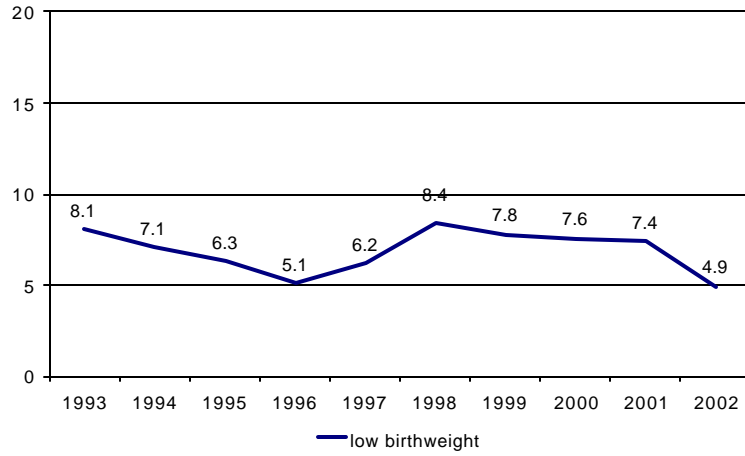
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	283	254	286	255	276	298	268	264	298	283
White	272	243	273	241	268	286	262	255	288	276
Black	1	2	---	2	2	1	1	---	1	---
American Indian	6	8	11	11	5	9	5	5	5	6
Asian & P.I.	1	1	2	1	1	1	---	4	4	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	3	---	3	---	2	---	3	---	1	---	2	---	2	---	8	2.7	3	---
1,500-2,499	19	6.7	15	5.9	15	5.2	11	4.3	14	5.1	24	8.1	19	7.1	18	6.8	14	4.7	11	3.9
Total < 2500	23	8.1	18	7.1	18	6.3	13	5.1	17	6.2	25	8.4	21	7.8	20	7.6	22	7.4	14	4.9
Preterm																				
Preterm < 37 weeks	40	14.1	23	9.1	29	10.1	19	7.5	35	12.7	48	16.1	27	10.1	32	12.1	32	10.7	29	10.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	217	76.7	207	81.5	239	83.6	213	83.5	242	87.7	258	86.6	216	80.6	211	79.9	251	84.2	229	80.9
Live Births to Teen Mothers																				
< 18	13	4.6	12	4.7	16	5.6	18	7.1	11	4.0	9	3.0	11	4.1	10	3.8	11	3.7	5	---
18-19	28	9.9	21	8.3	32	11.2	32	12.5	26	9.4	24	8.1	30	11.2	16	6.1	27	9.1	23	8.1
Total under 20	41	14.5	33	13.0	48	16.8	50	19.6	37	13.4	33	11.1	41	15.3	26	9.8	38	12.8	28	9.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	1	---	3	---	2	---	1	---	5	---	3	---	2	---	3	---	0	---
Infant deaths	7	24.7	3	---	3	---	2	---	3	---	2	---	2	---	1	---	3	---	1	---
Neonatal	4	---	3	---	2	---	1	---	0	---	1	---	0	---	1	---	3	---	1	---
Postneonatal	3	---	0	---	1	---	1	---	3	---	1	---	2	---	0	---	0	---	0	---
Age one to nine	1	---	0	---	1	---	0	---	0	---	1	---	0	---	3	---	0	---	1	---
Age ten to nineteen	1	---	2	---	3	---	1	---	4	---	3	---	0	---	2	---	1	---	5	---

*If number is less than 6, the rate is not calculated.

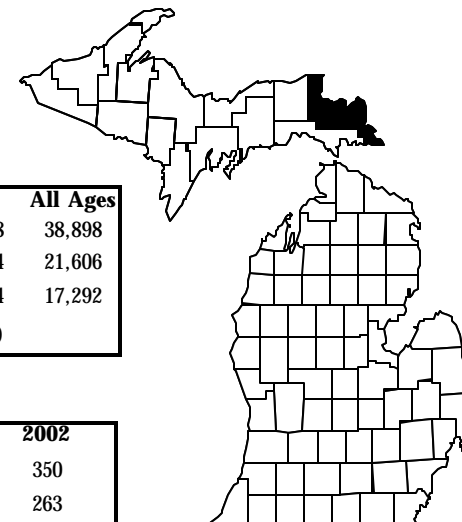
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Chippewa County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	452	2,068	2,125	2,356	2,790	3,632	2,688	2,902	3,145	3,251	3,005	2,426	1,926	1,646	4,938	38,898
Male	225	803	1,086	1,195	1,467	2,170	1,761	1,868	1,960	1,989	1,702	1,351	1,012	813	2,204	21,606
Female	227	813	1,039	1,161	1,323	1,462	927	1,034	1,185	1,262	1,303	1,075	914	833	2,734	17,292
Race(%):	White (76.9)		Black (5.5)		Native American (13.2)		Asian/Pacific Islander (0.6)		Multiple Race (1.8)		Hispanic (1.8)					

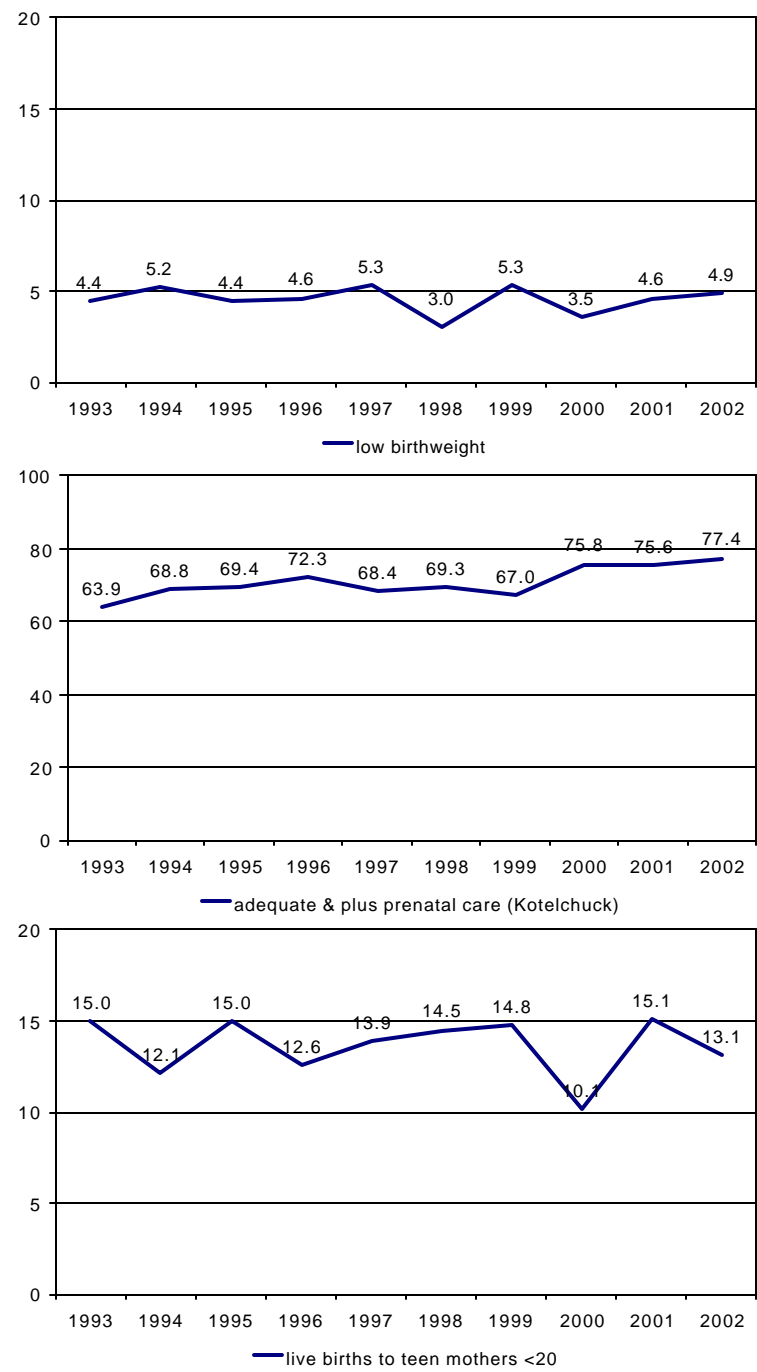
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	413	420	412	459	418	394	379	425	390	350
White	309	323	314	341	327	287	291	326	295	263
Black	1	4	2	7	---	3	4	1	1	2
American Indian	95	86	89	110	87	101	83	93	89	79
Asian & P.I.	4	3	6	1	4	3	1	5	4	4

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	6	1.4	1	---	5	---	6	1.4	3	---	3	---	5	---	6	1.5	4	---
1,500-2,499	18	4.4	16	3.8	17	4.1	16	3.5	16	3.8	9	2.3	17	4.5	10	2.4	12	3.1	13	3.7
Total < 2500	18	4.4	22	5.2	18	4.4	21	4.6	22	5.3	12	3.0	20	5.3	15	3.5	18	4.6	17	4.9
Preterm																				
Preterm < 37 weeks	35	8.5	33	7.9	33	8.0	31	6.8	42	10.0	34	8.6	29	7.7	24	5.6	30	7.7	30	8.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	264	63.9	289	68.8	286	69.4	332	72.3	286	68.4	273	69.3	254	67.0	322	75.8	295	75.6	271	77.4
Live Births to Teen Mothers																				
< 18	18	4.4	12	2.9	20	4.9	22	4.8	19	4.5	26	6.6	11	2.9	16	3.8	17	4.4	11	3.1
18-19	44	10.7	39	9.3	42	10.2	36	7.8	39	9.3	31	7.9	45	11.9	27	6.4	42	10.8	35	10.0
Total under 20	62	15.0	51	12.1	62	15.0	58	12.6	58	13.9	57	14.5	56	14.8	43	10.1	59	15.1	46	13.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	2	---	5	---	2	---	2	---	2	---	1	---	0	---	1	---	2	---
Infant deaths	1	---	4	---	1	---	2	---	3	---	2	---	1	---	4	---	1	---	2	---
Neonatal	0	---	4	---	1	---	2	---	3	---	1	---	1	---	1	---	1	---	2	---
Postneonatal	1	---	0	---	0	---	0	---	0	---	1	---	0	---	3	---	0	---	0	---
Age one to nine	1	---	1	---	1	---	0	---	1	---	0	---	0	---	0	---	2	---	0	---
Age ten to nineteen	4	---	2	---	8	---	4	---	2	---	3	---	2	---	3	---	5	---	3	---

*If number is less than 6, the rate is not calculated.

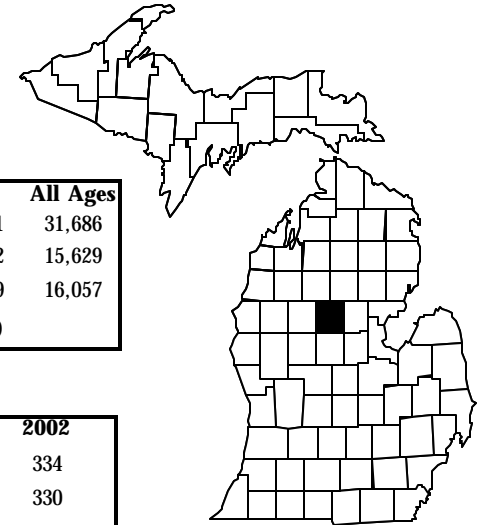
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Clare County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	377	1,821	1,981	2,244	2,227	1,864	1,635	1,834	2,066	2,274	2,175	2,144	1,971	1,959	5,491	31,686
Male	207	768	1,002	1,125	1,131	946	789	915	1,022	1,133	1,079	1,047	956	967	2,542	15,629
Female	170	676	979	1,119	1,096	918	846	919	1,044	1,141	1,096	1,097	1,015	992	2,949	16,057
Race(%):	White (97.9)		Black (0.4)		Native American (0.7)		Asian/Pacific Islander (0.2)		Multiple Race (0.3)		Hispanic (1.1)					

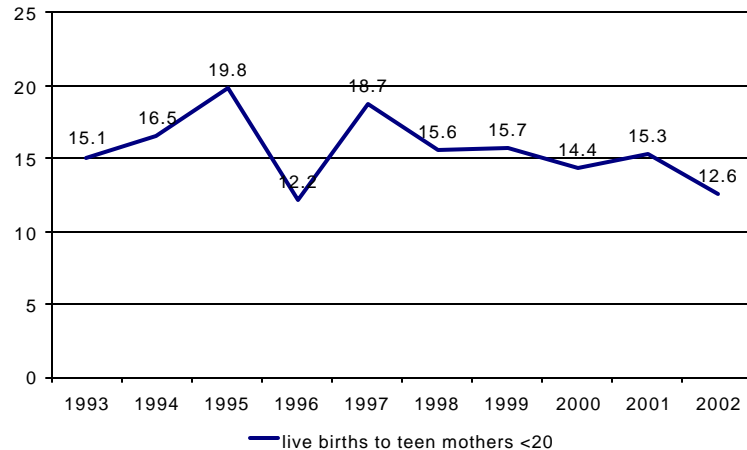
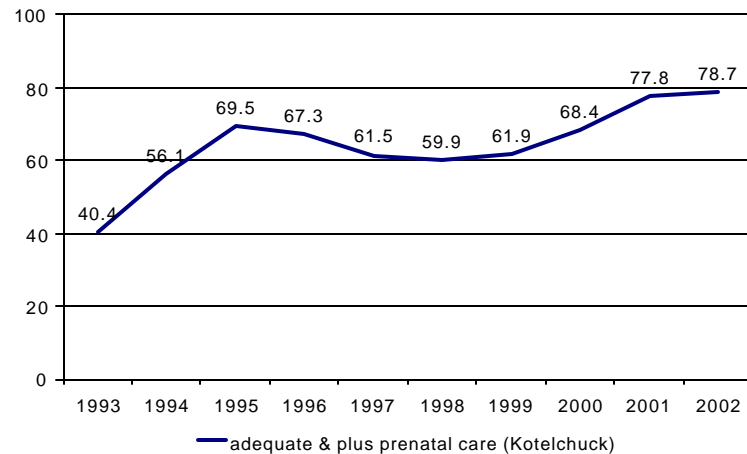
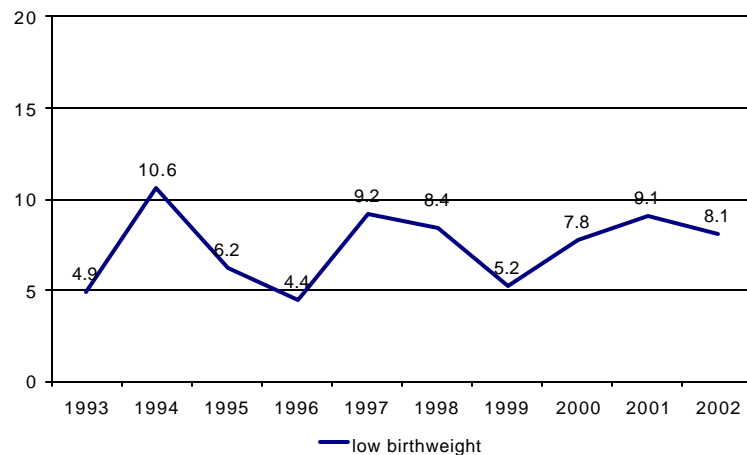
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	391	369	354	361	358	334	344	348	352	334
White	389	360	348	354	352	327	338	343	343	330
Black	---	1	---	---	---	2	2	---	1	---
American Indian	1	6	6	6	4	2	3	2	4	2
Asian & P.I.	---	2	---	1	2	3	1	3	2	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	3	---	8	2.2	3	---	2	---	8	2.2	5	---	5	---	8	2.3	7	2.0	4	---
1,500-2,499	16	4.1	31	8.4	19	5.4	14	3.9	25	7.0	23	6.9	13	3.8	19	5.5	25	7.1	23	6.9
Total < 2500	19	4.9	39	10.6	22	6.2	16	4.4	33	9.2	28	8.4	18	5.2	27	7.8	32	9.1	27	8.1
Preterm																				
Preterm < 37 weeks	27	6.9	45	12.2	39	11.0	27	7.5	34	9.5	44	13.2	32	9.3	43	12.4	42	11.9	46	13.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	158	40.4	207	56.1	246	69.5	243	67.3	220	61.5	200	59.9	213	61.9	238	68.4	274	77.8	263	78.7
Live Births to Teen Mothers																				
< 18	20	5.1	17	4.6	20	5.6	14	3.9	30	8.4	23	6.9	15	4.4	19	5.5	18	5.1	10	3.0
18-19	39	10.0	44	11.9	50	14.1	30	8.3	37	10.3	29	8.7	39	11.3	31	8.9	36	10.2	32	9.6
Total under 20	59	15.1	61	16.5	70	19.8	44	12.2	67	18.7	52	15.6	54	15.7	50	14.4	54	15.3	42	12.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	5	---	3	---	4	---	1	---	3	---	3	---	2	---	1	---	0	---	4	---
Infant deaths	4	---	3	---	0	---	2	---	1	---	2	---	4	---	4	---	1	---	1	---
Neonatal	0	---	3	---	0	---	1	---	1	---	1	---	3	---	4	---	1	---	0	---
Postneonatal	4	---	0	---	0	---	1	---	0	---	1	---	1	---	0	---	0	---	1	---
Age one to nine	2	---	2	---	3	---	0	---	3	---	2	---	1	---	1	---	0	---	2	---
Age ten to nineteen	0	---	3	---	2	---	5	---	4	---	2	---	2	---	1	---	0	---	0	---

*If number is less than 6, the rate is not calculated.

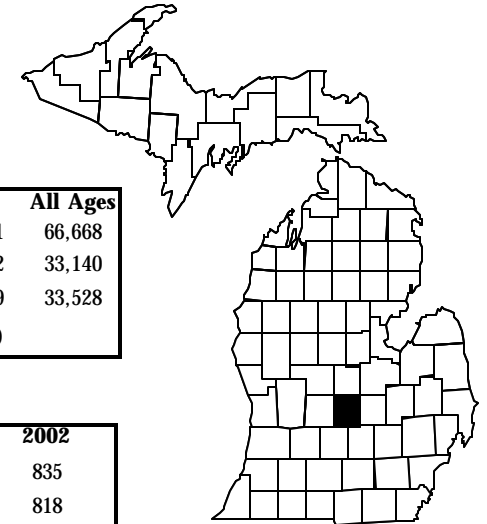
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Clinton County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	734	4,056	4,977	5,312	5,134	4,149	3,329	4,300	5,202	5,739	5,554	4,824	3,837	2,954	7,301	66,668
Male	353	1,639	2,642	2,704	2,718	2,148	1,654	2,061	2,540	2,868	2,786	2,401	1,955	1,459	3,212	33,140
Female	381	1,683	2,335	2,608	2,416	2,001	1,675	2,239	2,662	2,871	2,768	2,423	1,882	1,495	4,089	33,528
Race(%):	White (97.1)		Black (0.9)		Native American (0.4)		Asian/Pacific Islander (0.6)		Multiple Ethnicity (0.9)		Hispanic (2.5)					

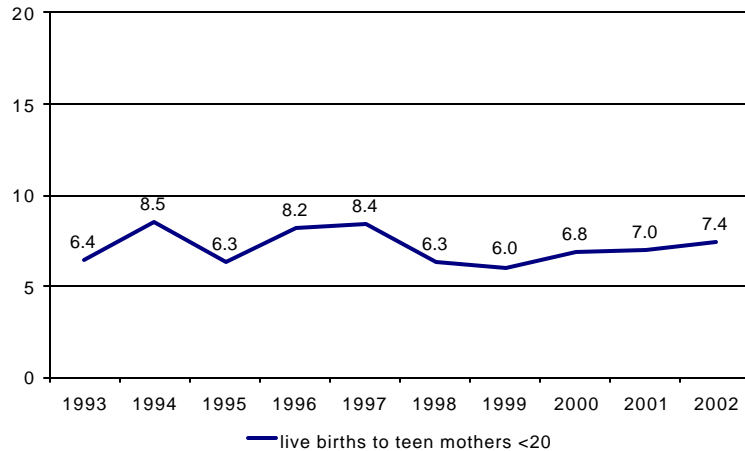
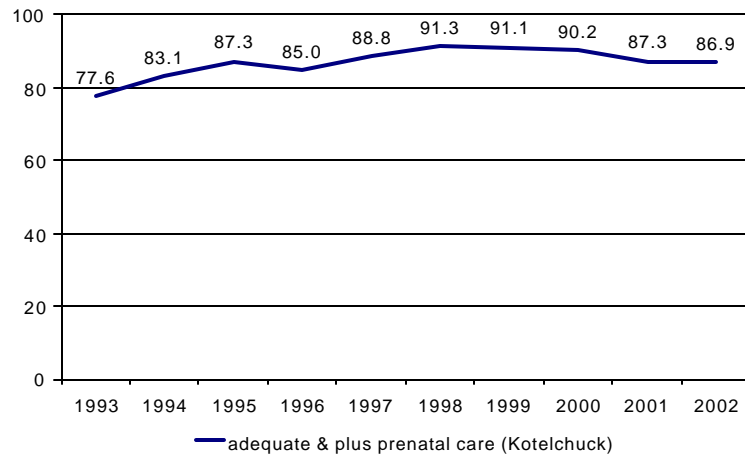
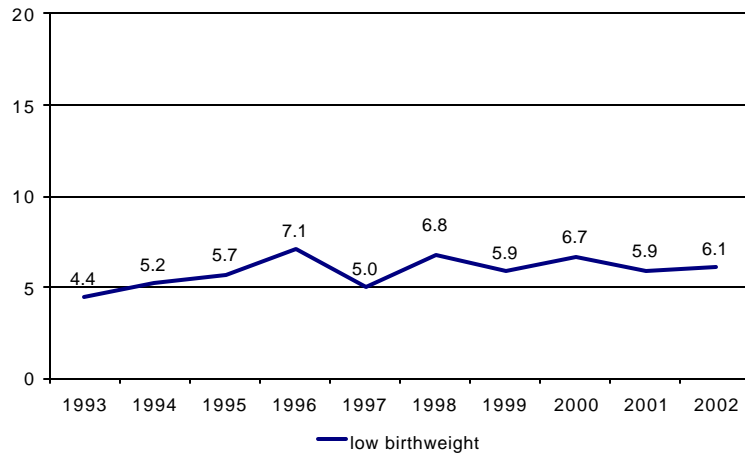
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	799	809	835	789	793	804	762	792	743	835
White	786	798	821	782	783	789	755	780	736	818
Black	1	---	4	5	2	5	---	4	4	8
American Indian	2	2	3	1	3	---	1	1	---	---
Asian & P.I.	6	6	7	1	5	10	6	7	3	9

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	0.8	7	0.9	12	1.4	4	---	6	0.8	10	1.2	11	1.4	13	1.6	9	1.2	10	1.2
1,500-2,499	29	3.6	35	4.3	36	4.3	52	6.6	34	4.3	45	5.6	34	4.5	40	5.1	35	4.7	41	4.9
Total < 2500	35	4.4	42	5.2	48	5.7	56	7.1	40	5.0	55	6.8	45	5.9	53	6.7	44	5.9	51	6.1
Preterm																				
Preterm < 37 weeks	79	9.9	72	8.9	81	9.7	59	7.5	67	8.4	71	8.8	70	9.2	73	9.2	82	11.0	84	10.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	620	77.6	672	83.1	729	87.3	671	85.0	704	88.8	734	91.3	694	91.1	714	90.2	649	87.3	726	86.9
Live Births to Teen Mothers																				
< 18	14	1.8	25	3.1	23	2.8	18	2.3	22	2.8	15	1.9	13	1.7	14	1.8	10	1.3	13	1.6
18-19	37	4.6	44	5.4	30	3.6	47	6.0	45	5.7	36	4.5	33	4.3	40	5.1	42	5.7	49	5.9
Total under 20	51	6.4	69	8.5	53	6.3	65	8.2	67	8.4	51	6.3	46	6.0	54	6.8	52	7.0	62	7.4
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	5	---	4	---	4	---	1	---	3	---	3	---	2	---	3	---	4	---	6	---
Infant deaths	2	---	4	---	7	8.4	1	---	3	---	3	---	3	---	5	---	5	---	5	---
Neonatal	1	---	1	---	5	---	0	---	1	---	2	---	1	---	4	---	4	---	4	---
Postneonatal	1	---	3	---	2	---	1	---	2	---	1	---	2	---	1	---	1	---	1	---
Age one to nine	3	---	1	---	0	---	2	---	1	---	3	---	2	---	3	---	1	---	3	---
Age ten to nineteen	3	---	2	---	5	---	3	---	10	---	3	---	5	---	2	---	2	---	9	---

*If number is less than 6, the rate is not calculated.

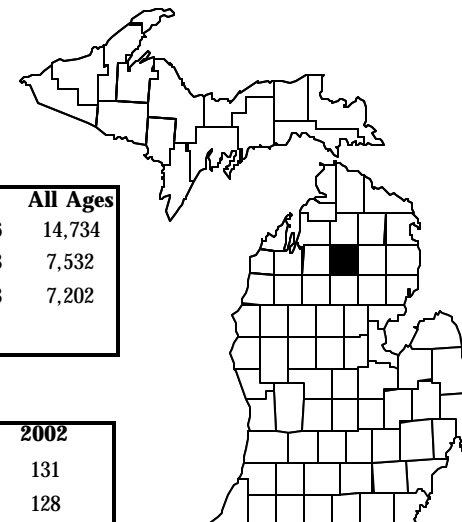
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Crawford County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	132	712	873	1,103	1,059	868	716	891	972	1,241	1,096	995	879	813	2,516	14,734
Male	74	309	456	619	567	463	386	471	499	621	562	524	418	400	1,163	7,532
Female	58	271	417	484	492	405	330	420	473	620	534	471	461	413	1,353	7,202
Race(%):	White (96.8)		Black (1.6)		Native American (0.6)		Asian/Pacific Islander (0.4)		Multiple Race (0.8)		Hispanic (1.1)					

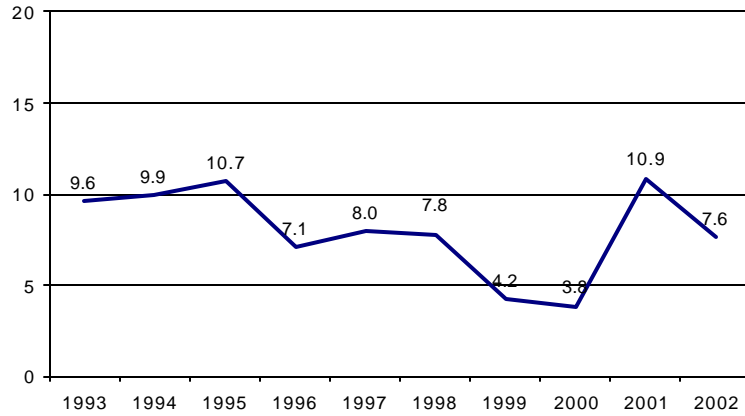
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	167	161	149	170	150	141	144	156	129	131
White	166	158	147	164	144	138	140	149	125	128
Black	1	1	1	2	1	1	1	4	2	2
American Indian	---	---	1	3	4	---	2	1	1	---
Asian & P.I.	---	2	---	1	1	2	1	2	---	1

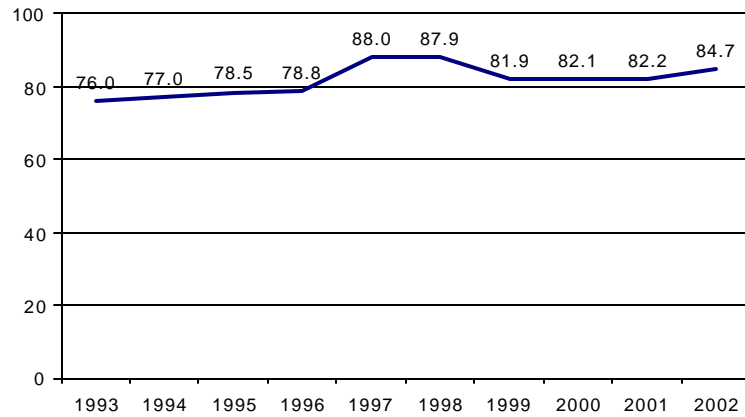
	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	7	4.2	3	---	1	---	3	---	4	---	2	---	2	---	2	---	2	---	3	---
1,500-2,499	9	5.4	13	8.1	15	10.1	9	5.3	8	5.3	9	6.4	4	---	4	---	12	9.3	7	5.3
Total < 2500	16	9.6	16	9.9	16	10.7	12	7.1	12	8.0	11	7.8	6	4.2	6	3.8	14	10.9	10	7.6
Preterm																				
Preterm < 37 weeks	24	14.4	19	11.8	18	12.1	19	11.2	18	12.0	16	11.3	16	11.1	10	6.4	19	14.7	18	13.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	127	76.0	124	77.0	117	78.5	134	78.8	132	88.0	124	87.9	118	81.9	128	82.1	106	82.2	111	84.7
Live Births to Teen Mothers																				
< 18	10	6.0	12	7.5	12	8.1	6	3.5	12	8.0	8	5.7	13	9.0	7	4.5	6	4.7	13	9.9
18-19	19	11.4	18	11.2	18	12.1	23	13.5	13	8.7	16	11.3	10	6.9	10	6.4	14	10.9	10	7.6
Total under 20	29	17.4	30	18.6	30	20.1	29	17.1	25	16.7	24	17.0	23	16.0	17	10.9	20	15.5	23	17.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	8	---	2	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---
Infant deaths	4	---	1	---	4	---	2	---	1	---	1	---	2	---	2	---	3	---	2	---
Neonatal	4	---	1	---	2	---	1	---	1	---	0	---	2	---	2	---	2	---	1	---
Postneonatal	0	---	0	---	2	---	1	---	0	---	1	---	0	---	0	---	1	---	1	---
Age one to nine	0	---	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---	3	---
Age ten to nineteen	2	---	2	---	0	---	2	---	0	---	0	---	0	---	3	---	0	---	0	---

*If number is less than 6, the rate is not calculated.

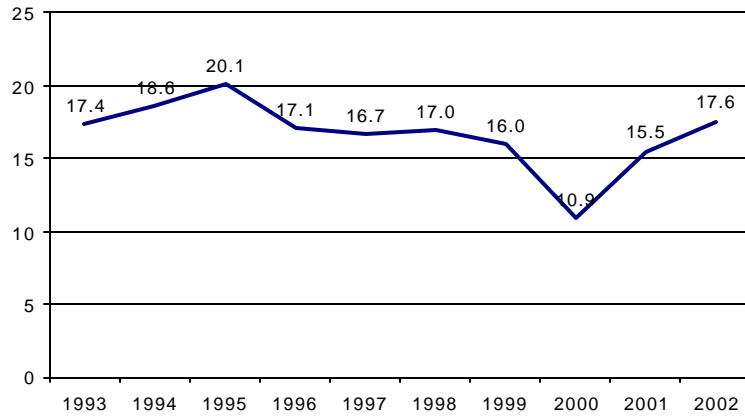
TRENDS (1993-2002)



low birthweight



adequate & plus prenatal care (Kotelchuck)

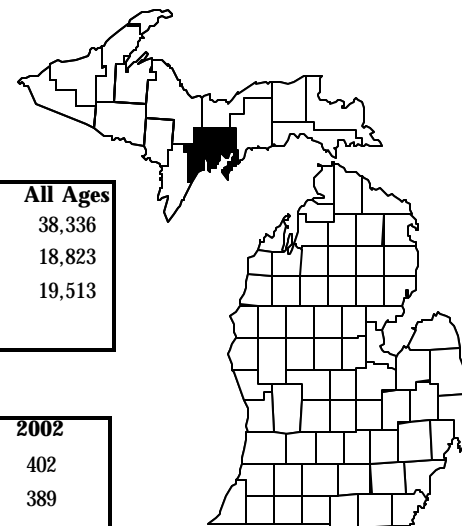


live births to teen mothers <20

MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Delta County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	393	2,031	2,141	2,702	2,787	2,493	1,760	2,078	2,478	3,079	3,256	2,852	2,132	1,954	6,593	38,336
Male	196	871	1,109	1,392	1,432	1,236	885	1,040	1,221	1,534	1,649	1,418	1,062	956	2,822	18,823
Female	197	767	1,032	1,310	1,355	1,257	875	1,038	1,257	1,545	1,607	1,434	1,070	998	3,771	19,513
Race(%):	White (96.1)		Black (0.1)		Native American (2.2)		Asian/Pacific Islander (0.3)		Multiple Race (0.2)		Hispanic (0.5)					

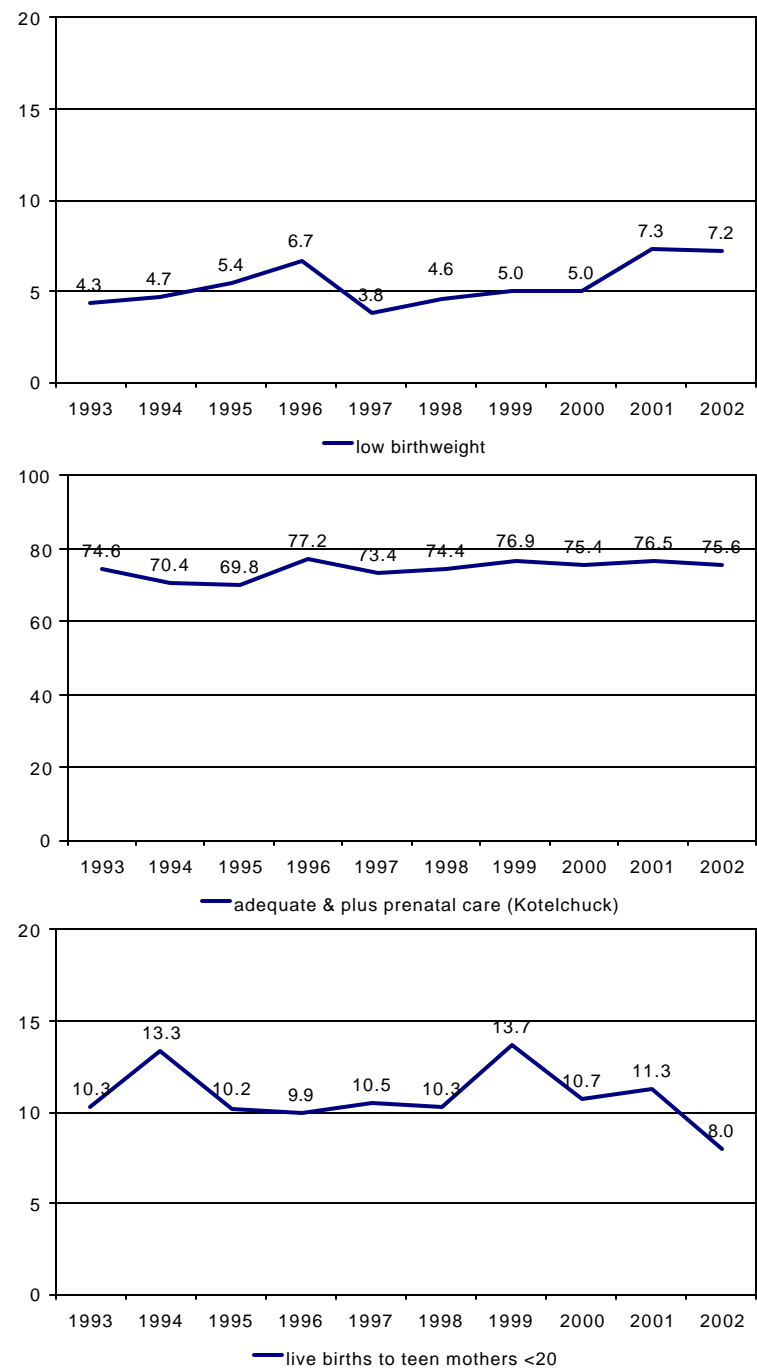
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	445	429	391	404	391	437	424	422	452	402
White	430	413	380	383	370	426	409	404	434	389
Black	1	1	2	---	2	---	---	---	2	---
American Indian	12	14	6	21	16	8	10	15	14	12
Asian & P.I.	2	1	2	---	3	2	5	3	1	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	8	1.9	2	---	8	2.0	1	---	1	---	1	---	6	1.4	12	2.7	2	---
1,500-2,499	15	3.4	12	2.8	19	4.9	19	4.7	14	3.6	19	4.3	20	4.7	15	3.6	21	4.6	27	6.7
Total < 2500	19	4.3	20	4.7	21	5.4	27	6.7	15	3.8	20	4.6	21	5.0	21	5.0	33	7.3	29	7.2
Preterm																				
Preterm < 37 weeks	27	6.1	36	8.4	20	5.1	29	7.2	26	6.6	41	9.4	20	4.7	28	6.6	47	10.4	43	10.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	332	74.6	302	70.4	273	69.8	312	77.2	287	73.4	325	74.4	326	76.9	318	75.4	346	76.5	304	75.6
Live Births to Teen Mothers																				
< 18	12	2.7	24	5.6	12	3.1	9	2.2	21	5.4	11	2.5	21	5.0	15	3.6	16	3.5	10	2.5
18-19	34	7.6	33	7.7	28	7.2	31	7.7	20	5.1	34	7.8	37	8.7	30	7.1	35	7.7	22	5.5
Total under 20	46	10.3	57	13.3	40	10.2	40	9.9	41	10.5	45	10.3	58	13.7	45	10.7	51	11.3	32	8.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	1	---	3	---	3	---	3	---	2	---	1	---	4	---	1	---	0	---
Infant deaths	6	13.5	9	21.0	3	---	1	---	2	---	1	---	0	---	5	---	6	13.3	0	---
Neonatal	4	---	7	16.3	2	---	0	---	1	---	0	---	0	---	3	---	5	---	0	---
Postneonatal	2	---	2	---	1	---	1	---	1	---	1	---	0	---	2	---	1	---	0	---
Age one to nine	0	---	2	---	1	---	0	---	3	---	0	---	1	---	0	---	2	---	1	---
Age ten to nineteen	3	---	1	---	2	---	2	---	5	---	2	---	1	---	4	---	2	---	3	---

*If number is less than 6, the rate is not calculated.

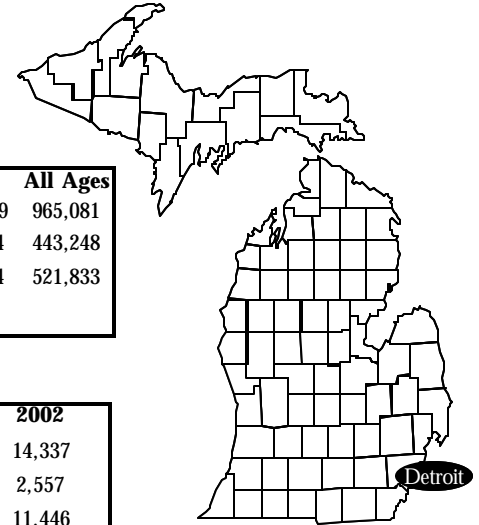
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Detroit City



1999 Population

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	14,805	62,633	90,470	74,971	66,747	66,145	77,965	69,690	68,782	70,684	62,835	51,114	38,467	31,384	118,389	965,081
Male	7,567	32,032	46,166	38,159	32,962	30,790	35,530	31,111	30,342	31,373	27,505	22,981	17,325	13,429	45,974	443,248
Female	7,238	30,598	44,304	36,811	33,784	35,355	42,437	38,579	38,440	39,312	35,330	28,133	21,142	17,956	72,414	521,833
Race(%):	White (13.8)		Black (82.8)		Native American (0.9)		Asian/Pacific Islander (1.4)		Ethnicity(%):		Hispanic (5.0)					

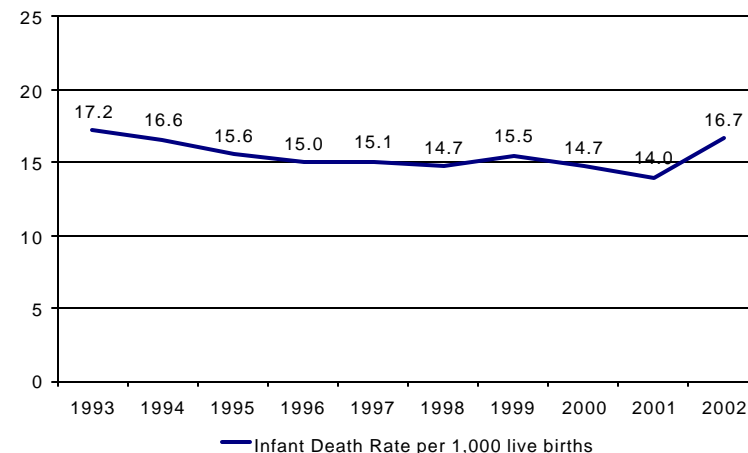
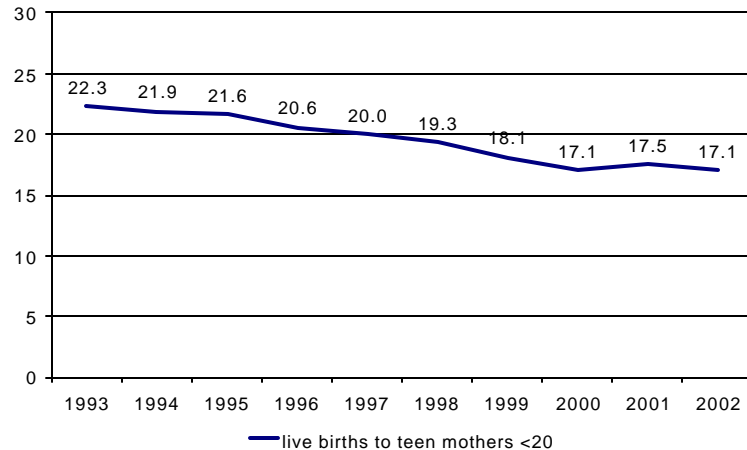
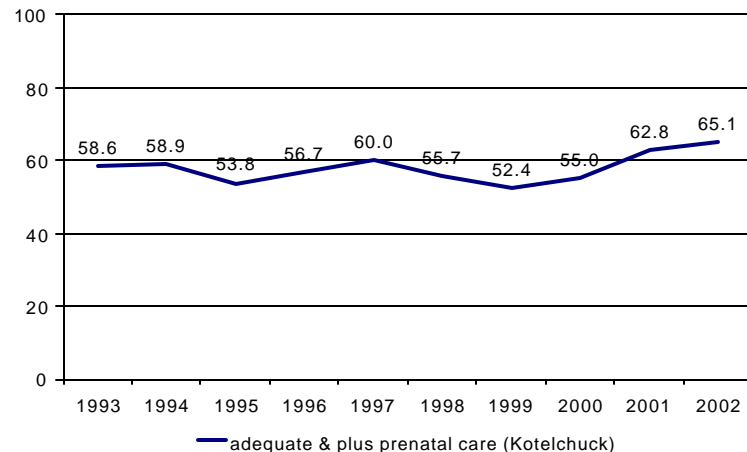
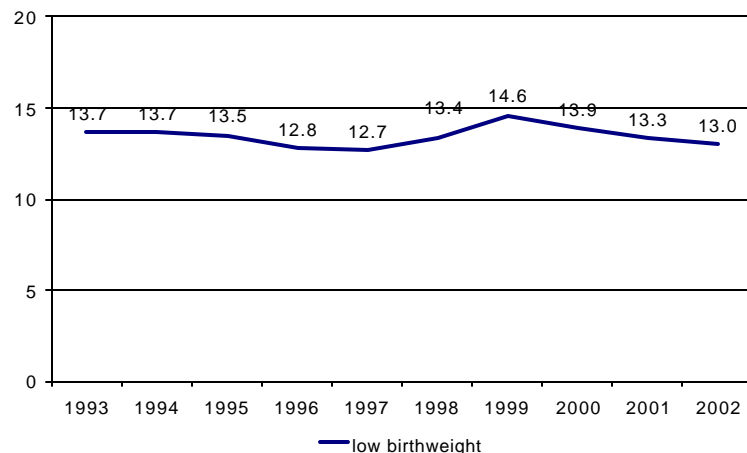
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	20,260	19,421	17,578	16,586	16,725	16,429	15,800	15,892	15,315	14,337
White	3,091	2,989	2,837	2,673	2,690	2,595	2,663	2,718	2,691	2,557
Black	16,914	16,105	14,459	13,605	13,731	13,589	12,798	12,812	12,354	11,446
American Indian	35	47	28	32	27	16	22	12	18	20
Asian & P.I.	188	248	209	229	231	193	209	203	167	248

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	615	3.0	623	3.2	506	2.9	470	2.8	493	2.9	535	3.3	570	3.6	477	3.0	470	3.1	470	3.3
1,500-2,499	2,156	10.6	2,046	10.5	1,867	10.6	1,656	10.0	1,624	9.7	1,666	10.1	1,739	11.0	1,727	10.9	1,571	10.3	1,389	9.7
Total < 2500	2,771	13.7	2,669	13.7	2,373	13.5	2,126	12.8	2,117	12.7	2,201	13.4	2,309	14.6	2,204	13.9	2,041	13.3	1,859	13.0
Preterm																				
Preterm < 37 weeks	3,739	18.5	3,399	17.5	2,966	16.9	2,777	16.7	2,791	16.7	2,777	16.9	2,742	17.4	2,712	17.1	2,525	16.5	2,339	16.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	11,879	58.6	11,431	58.9	9,459	53.8	9,407	56.7	10,032	60.0	9,145	55.7	8,273	52.4	8,738	55.0	9,614	62.8	9,340	65.1
Live Births to Teen Mothers																				
< 18	1,918	9.5	1,812	9.3	1,687	9.6	1,413	8.5	1,374	8.2	1,283	7.8	1,119	7.1	1,069	6.7	1,084	7.1	992	6.9
18-19	2,595	12.8	2,438	12.6	2,107	12.0	1,999	12.1	1,970	11.8	1,886	11.5	1,736	11.0	1,652	10.4	1,591	10.4	1,462	10.2
Total under 20	4,513	22.3	4,250	21.9	3,794	21.6	3,412	20.6	3,344	20.0	3,169	19.3	2,855	18.1	2,721	17.1	2,675	17.5	2,454	17.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	115	—	111	—	109	—	125	—	186	—	176	—	145	---	173	---	128	---	105	---
Infant deaths	348	17.2	322	16.6	274	15.6	248	15.0	253	15.1	241	14.7	245	15.5	233	14.7	214	14.0	240	16.7
Neonatal	244	12.0	215	11.1	180	10.2	160	9.6	166	9.9	159	9.7	159	10.1	159	10.0	140	9.1	153	10.7
Postneonatal	104	5.1	107	5.5	94	5.3	88	5.3	87	5.2	82	5.0	86	5.4	74	4.7	74	4.8	87	6.1
Age one to nine	97	---	82	---	83	---	67	---	71	---	82	---	65	---	64	---	45	---	63	---
Age ten to nineteen	181	---	182	---	143	---	137	---	119	---	109	---	96	—	107	---	99	---	96	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		6.6	2.1	4.5	Maternal health/prematurity
1500g+	Fetal	1.5	1.1	0.4	Maternal care
	Neonatal	1.8	1.2	0.6	Newborn care
	Postneonatal	3.7	1.0	2.7	Infant health
Total		13.6	5.4	8.2	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

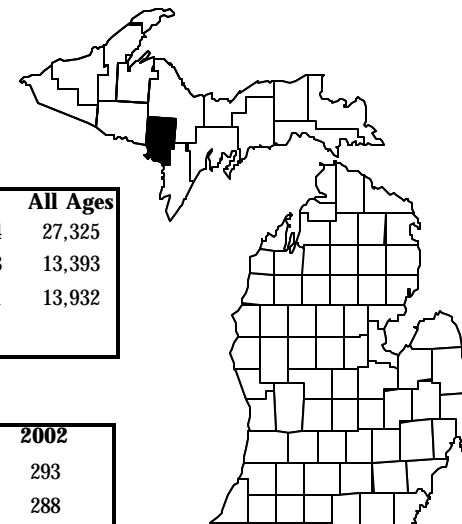
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Dickinson County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	264	1,378	1,754	2,011	2,054	1,390	1,161	1,537	1,952	2,282	2,304	1,938	1,403	1,247	4,914	27,325
Male	127	573	927	1,070	1,086	708	590	748	992	1,104	1,184	1,016	696	599	1,973	13,393
Female	137	541	827	941	968	682	571	789	960	1,178	1,120	922	707	648	2,941	13,932
Race(%):	White (98.3)		Black (0.1)		Native American (0.5)		Asian/Pacific Islander (0.5)		Multiple Race (0.9)		Hispanic (%)		Hispanic (0.7)			

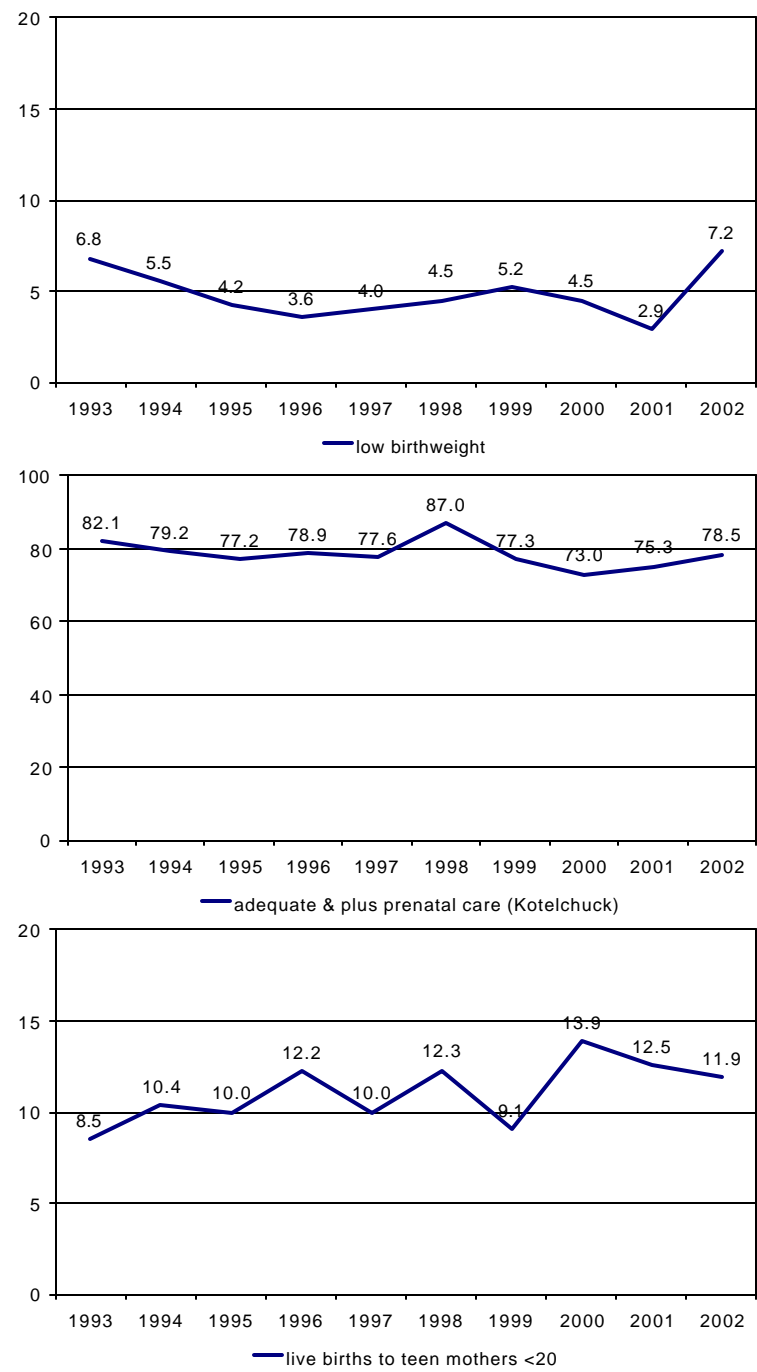
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	340	308	289	304	299	292	286	267	279	293
White	335	302	282	295	295	286	279	261	276	288
Black	---	---	---	1	---	1	---	---	---	---
American Indian	3	5	6	4	1	2	5	4	2	4
Asian & P.I.	2	1	1	3	3	2	2	2	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	1	---	1	---	3	---	2	---	4	---	3	---	4	---	2	---	0	---
1,500-2,499	19	5.6	16	5.2	11	3.8	8	2.6	10	3.3	9	3.1	12	4.2	8	3.0	6	2.2	21	7.2
Total < 2500	23	6.8	17	5.5	12	4.2	11	3.6	12	4.0	13	4.5	15	5.2	12	4.5	8	2.9	21	7.2
Preterm																				
Preterm < 37 weeks	41	12.1	32	10.4	20	6.9	23	7.6	30	10.0	33	11.3	26	9.1	21	7.9	28	10.0	42	14.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	279	82.1	244	79.2	223	77.2	240	78.9	232	77.6	254	87.0	221	77.3	195	73.0	210	75.3	230	78.5
Live Births to Teen Mothers																				
< 18	13	3.8	9	2.9	6	2.1	12	3.9	11	3.7	9	3.1	7	2.4	10	3.7	5	---	11	3.8
18-19	16	4.7	23	7.5	23	8.0	25	8.2	19	6.4	27	9.2	19	6.6	27	10.1	30	10.8	24	8.2
Total under 20	29	8.5	32	10.4	29	10.0	37	12.2	30	10.0	36	12.3	26	9.1	37	13.9	35	12.5	35	11.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	0	---	1	---	1	---	0	---	1	---	1	---	1	---	1	---	1	---
Infant deaths	1	---	1	---	2	---	1	---	0	---	4	---	2	---	0	---	2	---	0	---
Neonatal	1	---	0	---	2	---	1	---	0	---	3	---	1	---	0	---	1	---	0	---
Postneonatal	0	---	1	---	0	---	0	---	0	---	1	---	1	---	0	---	1	---	0	---
Age one to nine	0	---	2	---	0	---	0	---	0	---	1	---	1	---	2	---	0	---	0	---
Age ten to nineteen	1	---	2	---	1	---	2	---	4	---	0	---	0	---	0	---	2	---	2	---

*If number is less than 6, the rate is not calculated.

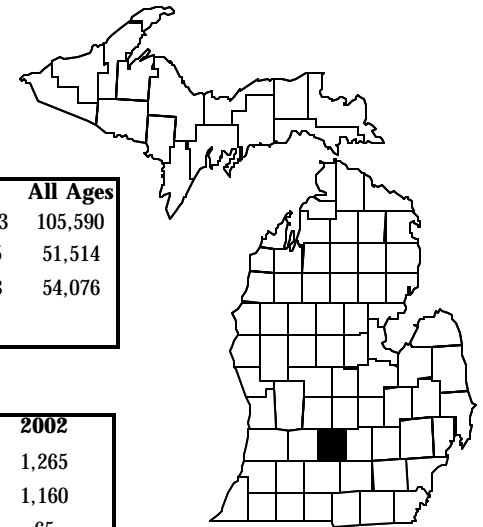
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Eaton County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,297	6,427	7,097	7,890	8,075	7,247	6,142	7,056	7,458	8,571	8,531	8,119	6,345	4,359	12,273	105,590
Male	657	2,607	3,552	4,067	4,163	3,646	3,006	3,504	3,630	4,095	4,136	3,995	3,154	2,107	5,195	51,514
Female	640	2,523	3,545	3,823	3,912	3,601	3,136	3,552	3,828	4,476	4,395	4,124	3,191	2,252	7,078	54,076
Race(%):	White (91.0)		Black (5.9)		Native American (0.5)		Asian/Pacific Islander (1.3)		Multiple Ethnicity (0.3)		Hispanic (3.5)					

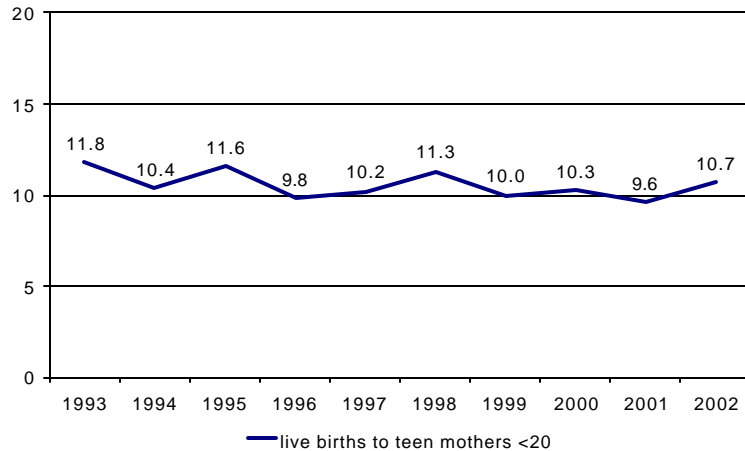
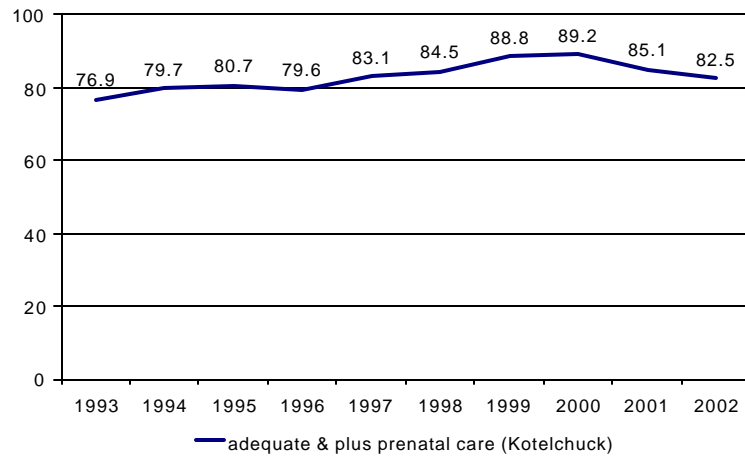
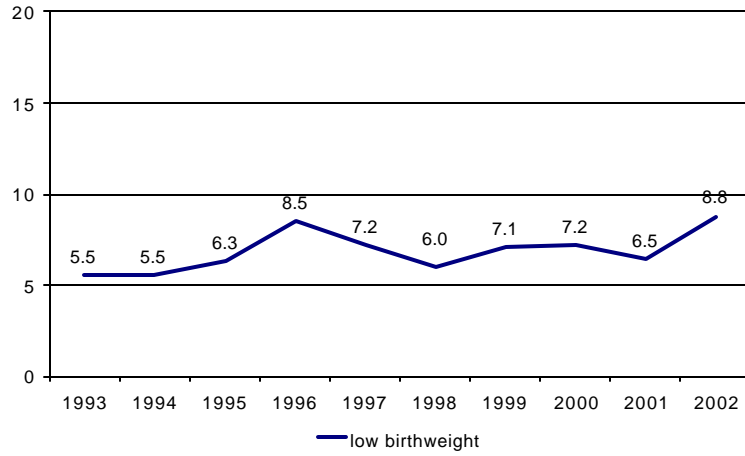
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,217	1,159	1,215	1,243	1,200	1,185	1,152	1,292	1,301	1,265
White	1,156	1,100	1,152	1,174	1,134	1,117	1,085	1,184	1,215	1,160
Black	49	45	49	50	47	52	40	65	54	65
American Indian	4	3	7	3	5	4	3	7	3	4
Asian & P.I.	6	8	5	16	13	12	22	32	24	34

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	0.5	12	1.0	14	1.2	18	1.4	20	1.7	17	1.4	11	1.0	10	0.8	11	0.8	16	1.3
1,500-2,499	61	5.0	52	4.5	62	5.1	88	7.1	66	5.5	54	4.6	71	6.2	83	6.4	73	5.6	95	7.5
Total < 2500	67	5.5	64	5.5	76	6.3	106	8.5	86	7.2	71	6.0	82	7.1	93	7.2	84	6.5	111	8.8
Preterm																				
Preterm < 37 weeks	85	7.0	111	9.6	119	9.8	105	8.4	124	10.3	113	9.5	122	10.6	137	10.6	136	10.5	160	12.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	936	76.9	924	79.7	980	80.7	989	79.6	997	83.1	1,001	84.5	1,023	88.8	1,153	89.2	1,107	85.1	1,043	82.5
Live Births to Teen Mothers																				
< 18	49	4.0	40	3.5	47	3.9	44	3.5	43	3.6	47	4.0	34	3.0	43	3.3	42	3.2	35	2.8
18-19	94	7.7	80	6.9	94	7.7	78	6.3	79	6.6	87	7.3	81	7.0	90	7.0	83	6.4	100	7.9
Total under 20	143	11.8	120	10.4	141	11.6	122	9.8	122	10.2	134	11.3	115	10.0	133	10.3	125	9.6	135	10.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	5	---	3	---	11	---	12	---	5	---	10	---	4	---	7	---	5	---	8	---
Infant deaths	5	---	7	6.0	7	5.8	7	5.6	2	---	8	6.8	1	---	7	5.4	1	---	8	6.3
Neonatal	1	---	3	---	4	---	6	4.8	2	---	4	---	0	---	6	4.6	1	---	6	4.7
Postneonatal	4	---	4	---	3	---	1	---	0	---	4	---	1	---	1	---	0	---	2	---
Age one to nine	4	---	4	---	3	---	5	---	1	---	2	---	2	---	2	---	1	---	3	---
Age ten to nineteen	10	---	7	---	4	---	11	---	3	---	6	---	10	---	7	---	5	---	6	---

*If number is less than 6, the rate is not calculated.

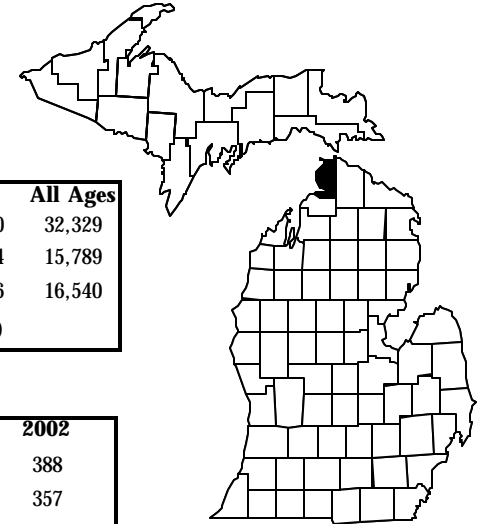
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Emmet County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	312	1,797	2,104	2,398	2,335	1,834	1,714	2,083	2,159	2,762	2,740	2,533	1,737	1,483	4,650	32,329
Male	137	763	1,091	1,204	1,208	922	849	1,062	1,099	1,306	1,334	1,268	868	744	1,934	15,789
Female	175	722	1,013	1,194	1,127	912	865	1,021	1,060	1,456	1,406	1,265	869	739	2,716	16,540
Race(%):	White (95.0)		Black (0.3)		Native American (3.1)		Asian/Pacific Islander (0.6)		Multiple Ethnicity (%)		Hispanic (0.9)					

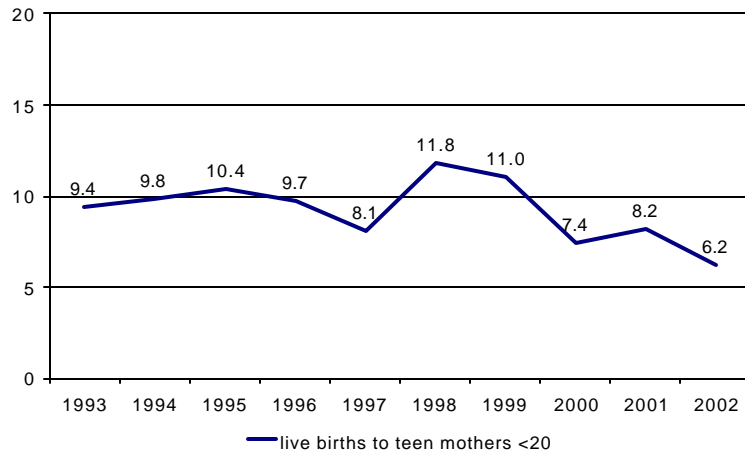
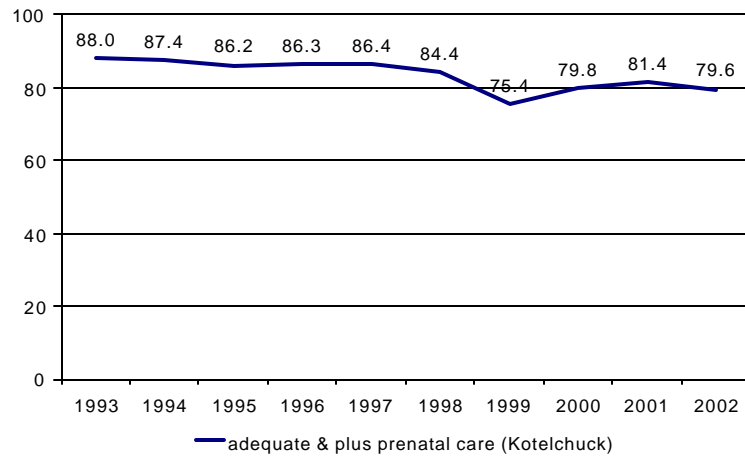
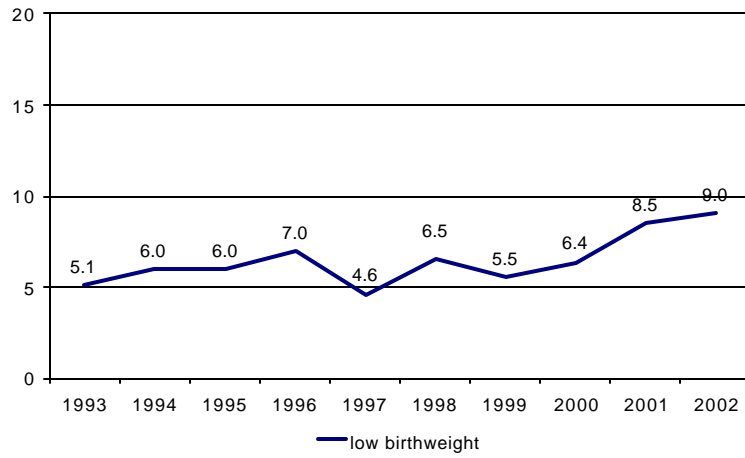
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	350	366	383	372	345	372	399	377	354	388
White	329	341	361	359	323	344	371	354	329	357
Black	2	1	1	---	2	---	1	2	2	1
American Indian	19	22	18	9	17	24	23	15	18	24
Asian & P.I.	---	2	3	4	3	4	4	3	5	5

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	1.7	3	---	3	---	3	---	0	---	2	---	6	1.5	3	---	7	2.0	4	---
1,500-2,499	12	3.4	19	5.2	20	5.2	23	6.2	16	4.6	22	5.9	16	4.0	21	5.6	23	6.5	31	8.0
Total < 2500	18	5.1	22	6.0	23	6.0	26	7.0	16	4.6	24	6.5	22	5.5	24	6.4	30	8.5	35	9.0
Preterm																				
Preterm < 37 weeks	37	10.6	36	9.8	39	10.2	41	11.0	28	8.1	41	11.0	46	11.5	44	11.7	42	11.9	47	12.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	308	88.0	320	87.4	330	86.2	321	86.3	298	86.4	314	84.4	301	75.4	301	79.8	288	81.4	309	79.6
Live Births to Teen Mothers																				
< 18	15	4.3	10	2.7	9	2.3	8	2.2	9	2.6	16	4.3	10	2.5	8	2.1	8	2.3	7	1.8
18-19	18	5.1	26	7.1	31	8.1	28	7.5	19	5.5	28	7.5	34	8.5	20	5.3	21	5.9	17	4.4
Total under 20	33	9.4	36	9.8	40	10.4	36	9.7	28	8.1	44	11.8	44	11.0	28	7.4	29	8.2	24	6.2
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	5	---	4	---	1	---	1	---	6	---	5	---	3	---	2	---	2	---	0	---
Infant deaths	4	---	0	---	3	---	1	---	0	---	1	---	3	---	3	---	2	---	3	---
Neonatal	3	---	0	---	2	---	1	---	0	---	1	---	2	---	1	---	2	---	1	---
Postneonatal	1	---	0	---	1	---	0	---	0	---	0	---	1	---	2	---	0	---	2	---
Age one to nine	0	---	1	---	0	---	1	---	2	---	0	---	1	---	0	---	0	---	1	---
Age ten to nineteen	3	---	1	---	1	---	1	---	5	---	2	---	3	---	3	---	1	---	2	---

*If number is less than 6, the rate is not calculated.

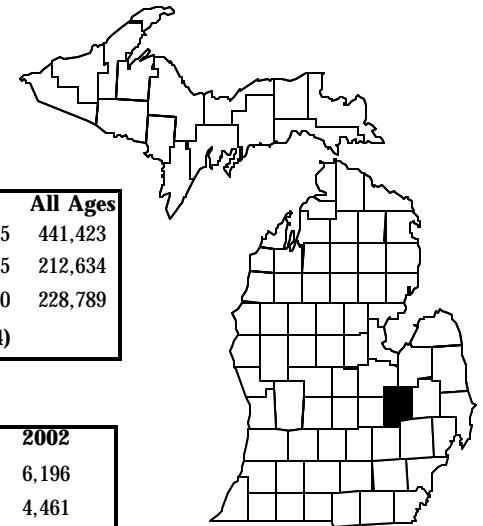
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Genesee County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	6,549	31,530	33,193	35,153	30,542	29,271	26,956	30,890	32,183	35,197	33,695	29,436	23,506	17,566	52,305	441,423
Male	3,436	12,869	17,018	17,832	15,686	14,200	13,007	14,884	15,511	16,821	16,171	14,206	11,343	8,265	21,385	212,634
Female	3,113	12,112	16,175	17,321	14,856	15,071	13,949	16,006	16,672	18,376	17,524	15,230	12,163	9,301	30,920	228,789
Race(%):	White (76.4)			Black (20.3)			Native American (0.6)			Asian/Pacific Islander (0.9)			Multiple Ethnicity (%)			Hispanic (2.4)

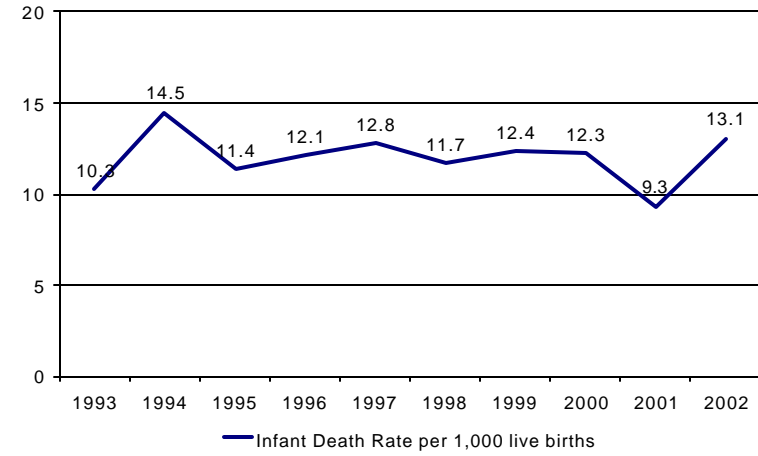
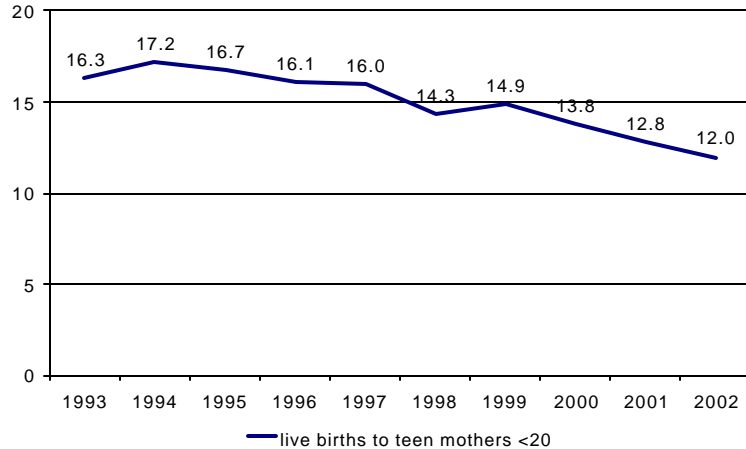
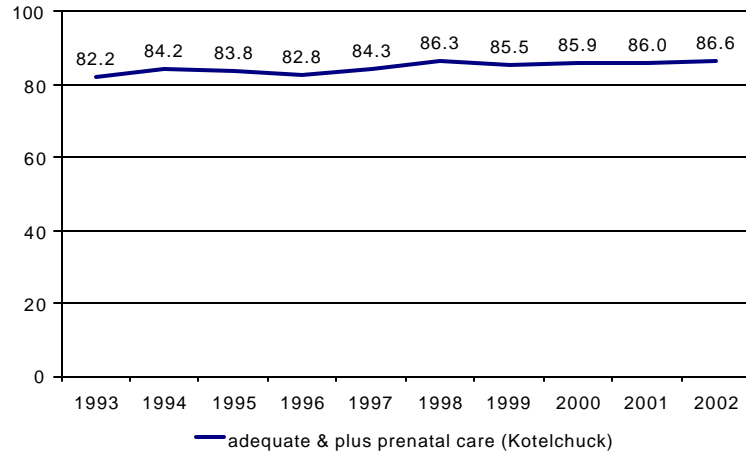
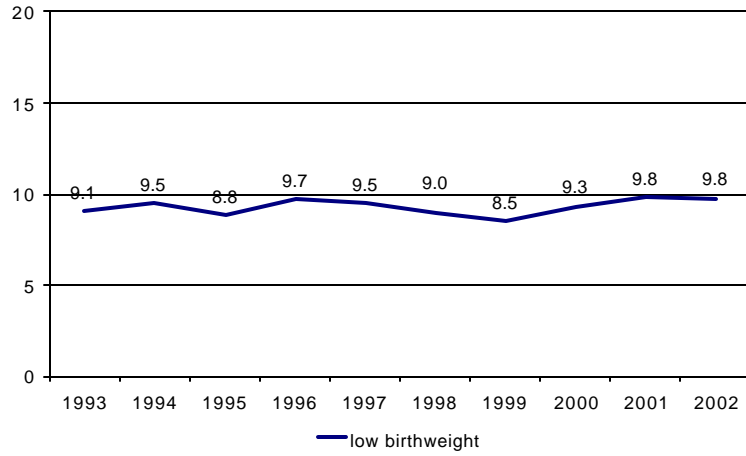
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	6,995	6,610	6,469	6,434	6,315	6,399	6,539	6,358	6,321	6,196
White	4,804	4,484	4,575	4,542	4,501	4,597	4,578	4,537	4,533	4,461
Black	2,132	2,033	1,801	1,803	1,737	1,734	1,869	1,708	1,670	1,636
American Indian	15	22	24	20	3	8	10	10	8	15
Asian & P.I.	35	64	65	57	69	49	68	90	89	77

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	144	2.1	137	2.1	114	1.8	122	1.9	123	1.9	118	1.8	123	1.9	134	2.1	127	2.0	131	2.1
1,500-2,499	495	7.1	494	7.5	458	7.1	502	7.8	480	7.6	456	7.1	436	6.7	459	7.2	493	7.8	474	7.7
Total < 2500	639	9.1	631	9.5	572	8.8	624	9.7	603	9.5	574	9.0	559	8.5	593	9.3	620	9.8	605	9.8
Preterm																				
Preterm < 37 weeks	833	11.9	779	11.8	677	10.5	652	10.1	655	10.4	695	10.9	605	9.3	583	9.2	626	9.9	651	10.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	5,749	82.2	5,563	84.2	5,422	83.8	5,328	82.8	5,323	84.3	5,524	86.3	5,589	85.5	5,459	85.9	5,437	86.0	5,367	86.6
Live Births to Teen Mothers																				
< 18	468	6.7	460	7.0	452	7.0	422	6.6	386	6.1	346	5.4	350	5.4	316	5.0	261	4.1	238	3.8
18-19	674	9.6	678	10.3	626	9.7	613	9.5	624	9.9	570	8.9	622	9.5	562	8.8	546	8.6	504	8.1
Total under 20	1,142	16.3	1,138	17.2	1,078	16.7	1,035	16.1	1,010	16.0	916	14.3	972	14.9	878	13.8	807	12.8	742	12.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	29	---	27	---	26	---	31	---	36	---	28	---	37	---	34	---	30	---	31	---
Infant deaths	72	10.3	96	14.5	74	11.4	78	12.1	81	12.8	75	11.7	81	12.4	78	12.3	59	9.3	81	13.1
Neonatal	43	6.1	63	9.5	41	6.3	51	7.9	45	7.1	43	6.7	56	8.6	54	8.5	40	6.3	48	7.7
Postneonatal	29	4.1	33	5.0	33	5.1	27	4.2	36	5.7	32	5.0	25	3.8	24	3.8	19	3.0	33	5.3
Age one to nine	27	---	20	---	27	---	22	---	18	---	23	---	15	---	16	---	20	---	16	---
Age ten to nineteen	46	---	37	---	33	---	50	---	46	---	32	---	32	---	33	---	32	---	19	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		4.3	2.1	2.2	Maternal health/prematurity
1500g+	Fetal	1.2	1.1	0.1	Maternal care
	Neonatal	1.6	1.2	0.4	Newborn care
	Postneonatal	3.1	1.0	2.1	Infant health
Total		10.2	5.4	4.8	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

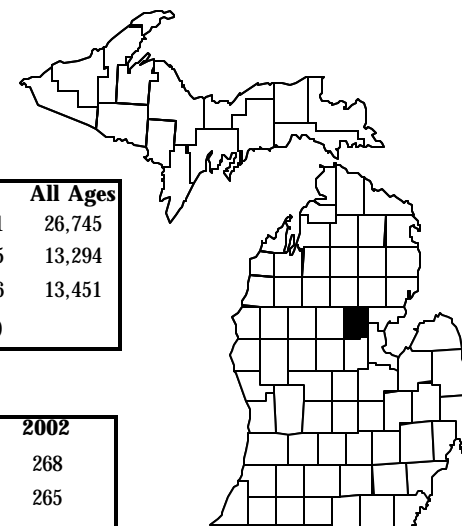
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Gladwin County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	325	1,483	1,552	1,862	1,774	1,486	1,242	1,536	1,686	1,887	1,846	1,806	1,770	1,814	5,001	26,745
Male	174	596	799	977	962	732	632	760	841	920	925	861	872	888	2,355	13,294
Female	151	562	753	885	812	754	610	776	845	967	921	945	898	926	2,646	13,451
Race(%):	White (98.0)		Black (0.2)		Native American (0.5)		Asian/Pacific Islander (0.5)		Multiple Race (0.5)		Hispanic (1.2)					

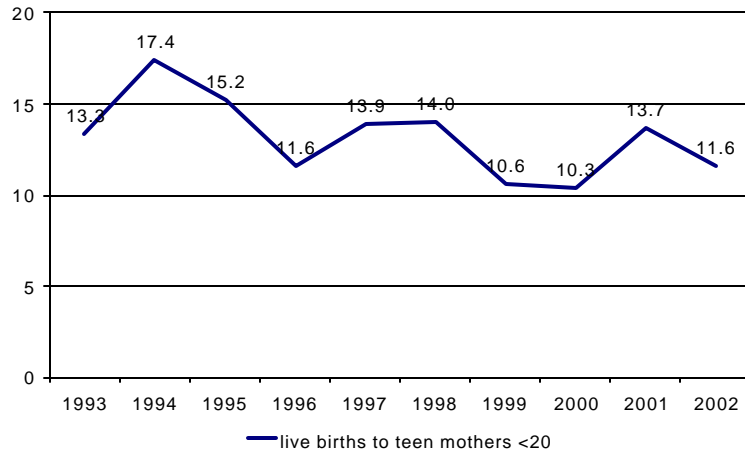
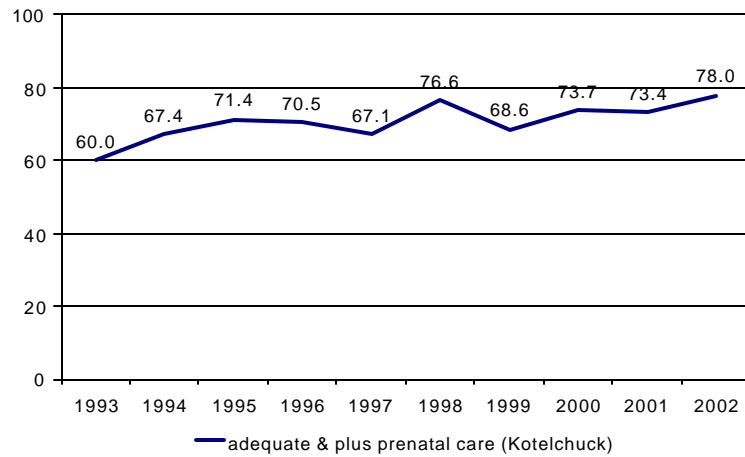
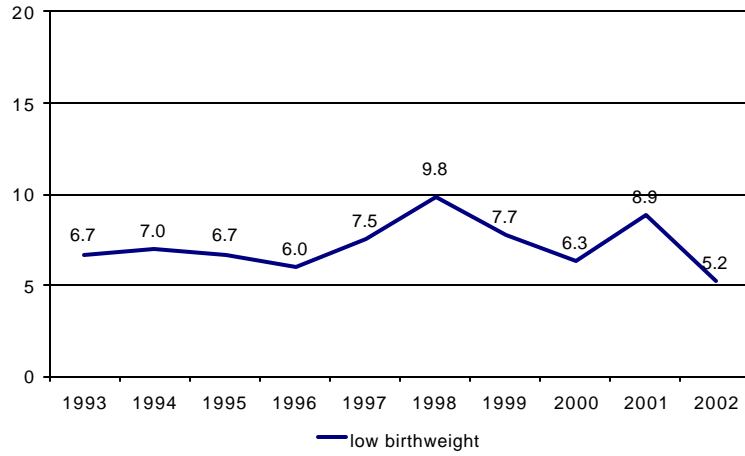
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	285	270	269	285	252	265	312	300	293	268
White	285	268	266	283	247	259	310	296	287	265
Black	---	---	---	---	---	2	---	1	1	---
American Indian	---	2	1	---	2	1	1	1	3	1
Asian & P.I.	---	---	---	2	3	3	---	2	2	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	6	2.2	0	---	2	---	2	---	7	2.6	5	---	3	---	3	---	1	---
1,500-2,499	17	6.0	13	4.8	18	6.7	15	5.3	17	6.7	19	7.2	19	6.1	16	5.3	23	7.8	13	4.9
Total < 2500	19	6.7	19	7.0	18	6.7	17	6.0	19	7.5	26	9.8	24	7.7	19	6.3	26	8.9	14	5.2
Preterm																				
Preterm < 37 weeks	28	9.8	30	11.1	28	10.4	24	8.4	23	9.1	35	13.2	33	10.6	33	11.0	37	12.6	29	10.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	171	60.0	182	67.4	192	71.4	201	70.5	169	67.1	203	76.6	214	68.6	221	73.7	215	73.4	209	78.0
Live Births to Teen Mothers																				
< 18	15	5.3	17	6.3	18	6.7	10	3.5	8	3.2	19	7.2	15	4.8	10	3.3	7	2.4	6	2.2
18-19	23	8.1	30	11.1	23	8.6	23	8.1	27	10.7	18	6.8	18	5.8	21	7.0	33	11.3	25	9.3
Total under 20	38	13.3	47	17.4	41	15.2	33	11.6	35	13.9	37	14.0	33	10.6	31	10.3	40	13.7	31	11.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	1	---	1	---	3	---	1	---	1	---	1	---	2	---	0	---	0	---
Infant deaths	0	---	1	---	4	---	3	---	3	---	3	---	5	---	1	---	4	---	3	---
Neonatal	0	---	1	---	2	---	2	---	2	---	2	---	4	---	0	---	2	---	1	---
Postneonatal	0	---	0	---	2	---	1	---	1	---	1	---	1	---	1	---	2	---	2	---
Age one to nine	0	---	1	---	2	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	0	---	2	---	5	---	3	---	0	---	4	---	3	---	1	---	1	---	2	---

*If number is less than 6, the rate is not calculated.

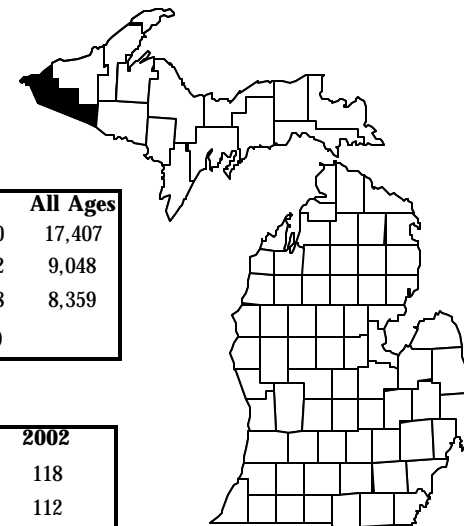
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Gogebic County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	118	655	830	1,009	1,238	1,338	974	937	1,137	1,255	1,251	1,165	951	867	3,800	17,407
Male	59	275	428	514	710	844	634	555	637	643	639	643	472	403	1,592	9,048
Female	59	262	402	495	528	494	340	382	500	612	612	522	479	464	2,208	8,359
Race(%):	White (92.5)		Black (4.1)		Native American (2.2)		Asian/Pacific Islander (0.3)		Multiple Race (0.9)		Hispanic (1.1)					

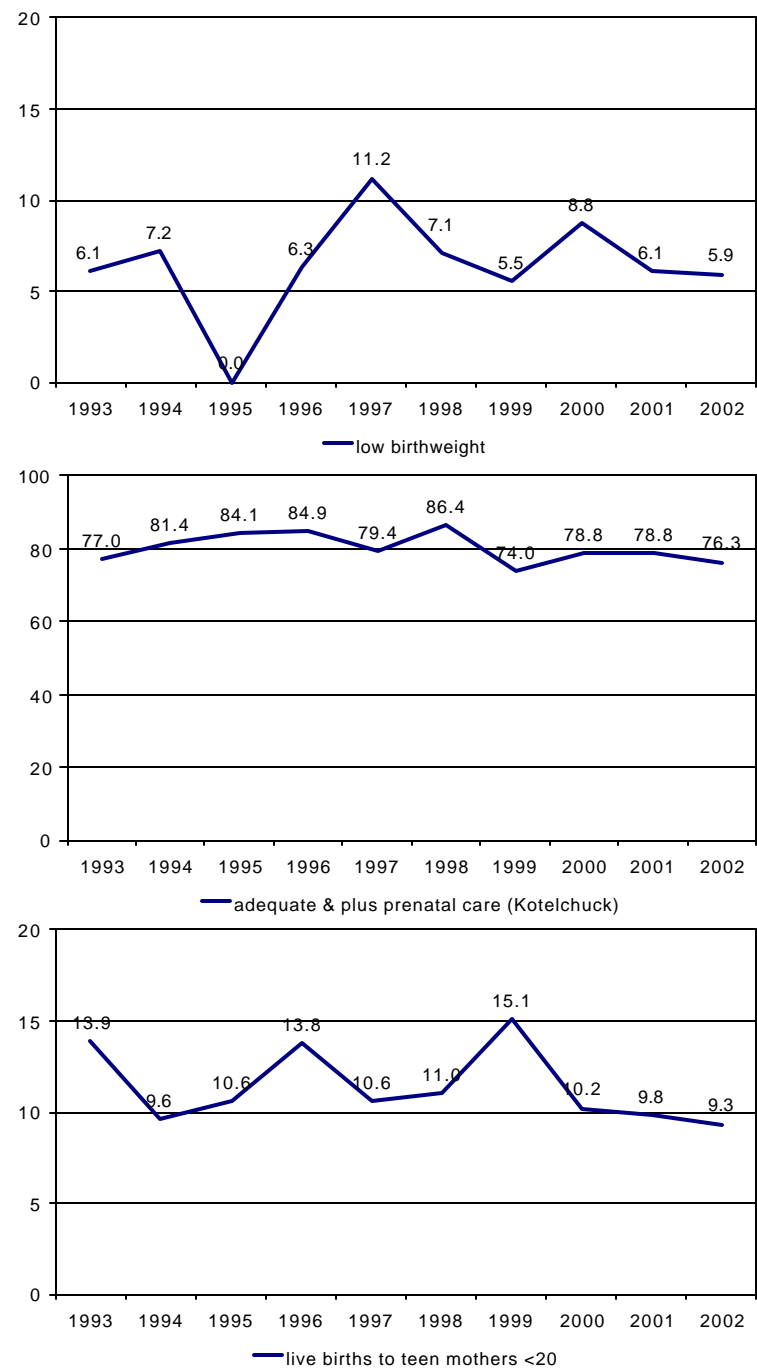
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	165	167	151	159	170	154	146	137	132	118
White	160	157	144	146	152	144	138	130	127	112
Black	---	---	---	1	---	---	---	---	---	---
American Indian	5	10	7	12	15	9	7	6	4	6
Asian & P.I.	---	---	---	---	3	---	1	1	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	3	---	1	---	0	---	11	6.5	5	---	0	---	1	---	2	---	0	---
1,500-2,499	9	5.5	9	5.4	4	---	10	6.3	8	4.7	6	3.9	8	5.5	11	8.0	6	4.5	7	5.9
Total < 2500	10	6.1	12	7.2	5	---	10	6.3	19	11.2	11	7.1	8	5.5	12	8.8	8	6.1	7	5.9
Preterm																				
Preterm < 37 weeks	8	4.8	18	10.8	11	7.3	13	8.2	24	14.1	18	11.7	11	7.5	21	15.3	9	6.8	14	11.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	127	77.0	136	81.4	127	84.1	135	84.9	135	79.4	133	86.4	108	74.0	108	78.8	104	78.8	90	76.3
Live Births to Teen Mothers																				
< 18	6	3.6	8	4.8	4	---	8	5.0	6	3.5	3	---	6	4.1	4	---	7	5.3	3	---
18-19	17	10.3	8	4.8	12	7.9	14	8.8	12	7.1	14	9.1	16	11.0	10	7.3	6	4.5	8	6.8
Total under 20	23	13.9	16	9.6	16	10.6	22	13.8	18	10.6	17	11.0	22	15.1	14	10.2	13	9.8	11	9.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	2	---	0	---	2	---	0	---	0	---	0	---	1	---	0	---	0	---
Infant deaths	1	---	1	---	0	---	0	---	6	35.3	3	---	1	---	1	---	0	---	0	---
Neonatal	0	---	1	---	0	---	0	---	6	35.3	0	---	1	---	1	---	0	---	0	---
Postneonatal	1	---	0	---	0	---	0	---	0	---	3	---	0	---	0	---	0	---	0	---
Age one to nine	2	---	0	---	1	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---
Age ten to nineteen	1	---	1	---	3	---	1	---	2	---	0	---	2	---	1	---	1	---	0	---

*If number is less than 6, the rate is not calculated.

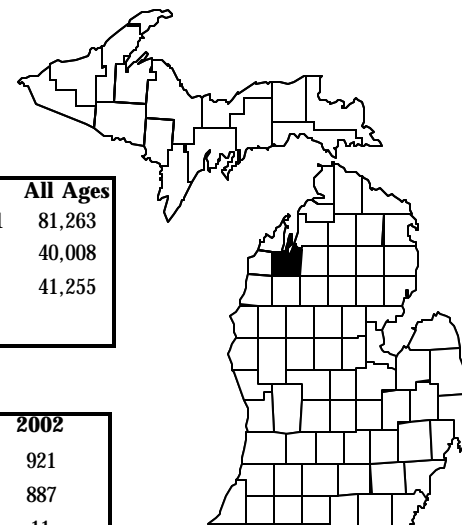
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Grand Traverse County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	998	4,832	5,036	5,935	5,922	5,279	4,594	5,519	5,982	7,028	6,939	5,857	4,369	3,240	10,731	81,263
Male	497	1,957	2,547	3,075	3,051	2,776	2,330	2,879	2,979	3,501	3,391	2,920	2,156	1,509	4,440	40,008
Female	501	1,877	2,489	2,860	2,871	2,503	2,264	2,640	3,003	3,527	3,548	2,937	2,213	1,731	6,291	41,255
Race(%):	White (96.9)		Black (0.7)		Native American (0.9)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (0.5)		Hispanic (1.5)					

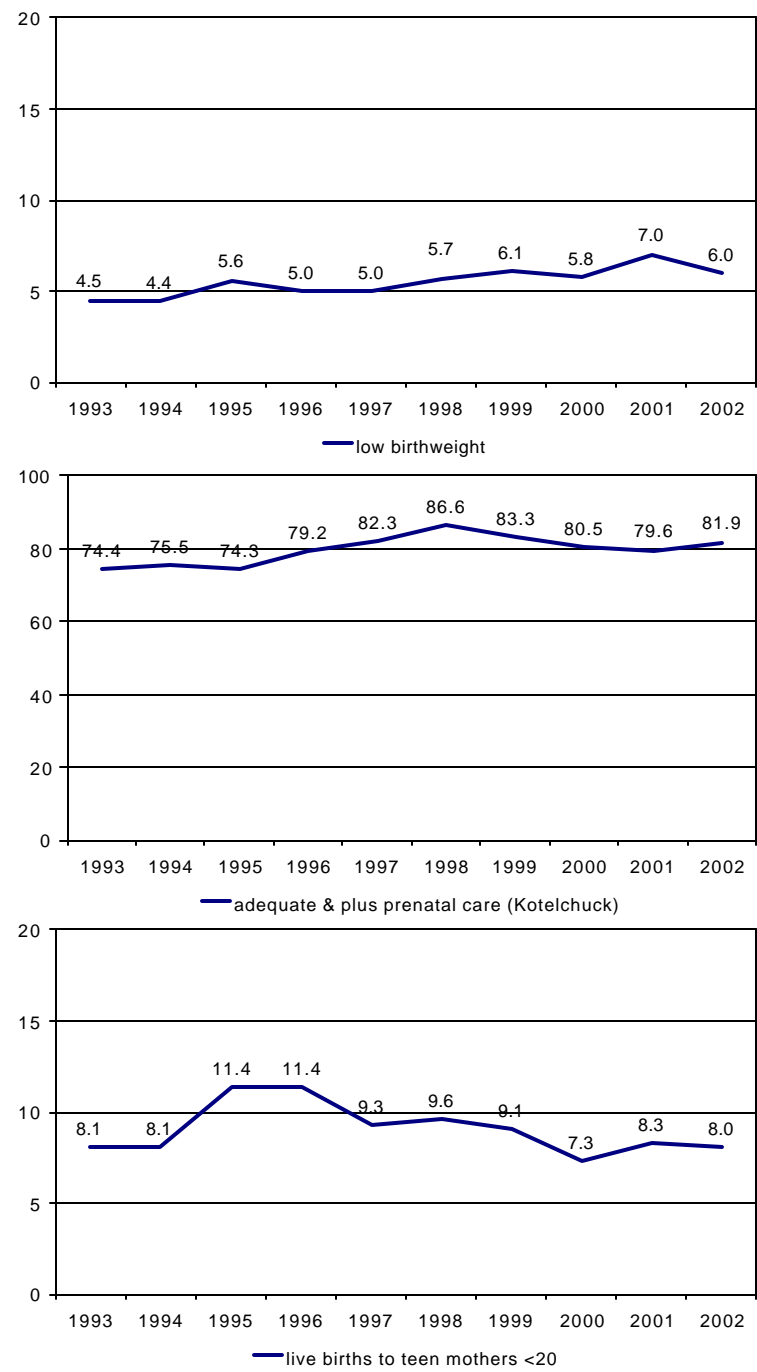
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	886	903	870	877	894	926	912	1,026	925	921
White	862	880	844	858	868	895	886	994	894	887
Black	1	3	4	4	6	3	3	2	7	11
American Indian	15	14	11	11	11	20	11	16	9	14
Asian & P.I.	6	5	8	4	8	8	7	10	13	8

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	0.7	7	0.8	6	0.7	9	1.0	6	0.7	12	1.3	5	---	8	0.8	14	1.5	9	1.0
1,500-2,499	34	3.8	33	3.7	43	4.9	35	4.0	39	4.4	41	4.4	51	5.6	51	5.0	51	5.5	46	5.0
Total < 2500	40	4.5	40	4.4	49	5.6	44	5.0	45	5.0	53	5.7	56	6.1	59	5.8	65	7.0	55	6.0
Preterm																				
Preterm < 37 weeks	79	8.9	68	7.5	75	8.6	66	7.5	73	8.2	92	9.9	98	10.7	92	9.0	102	11.0	90	9.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	659	74.4	682	75.5	646	74.3	695	79.2	736	82.3	802	86.6	760	83.3	826	80.5	736	79.6	754	81.9
Live Births to Teen Mothers																				
< 18	24	2.7	23	2.5	34	3.9	30	3.4	27	3.0	24	2.6	28	3.1	17	1.7	26	2.8	19	2.1
18-19	48	5.4	50	5.5	65	7.5	70	8.0	56	6.3	65	7.0	55	6.0	58	5.7	51	5.5	55	6.0
Total under 20	72	8.1	73	8.1	99	11.4	100	11.4	83	9.3	89	9.6	83	9.1	75	7.3	77	8.3	74	8.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	3	---	4	---	3	---	4	---	2	---	2	---	0	---	0	---	0	---
Infant deaths	8	9.0	3	---	4	---	7	8.0	4	---	5	---	6	6.6	6	5.8	8	8.6	6	6.5
Neonatal	6	6.8	0	---	2	---	4	---	3	---	1	---	4	---	5	---	8	8.6	5	---
Postneonatal	2	---	3	---	2	---	3	---	1	---	4	---	2	---	1	---	0	---	1	---
Age one to nine	1	---	2	---	1	---	2	---	2	---	3	---	2	---	2	---	2	---	1	---
Age ten to nineteen	6	---	4	---	3	---	5	---	7	---	5	---	5	---	5	---	4	---	3	---

*If number is less than 6, the rate is not calculated.

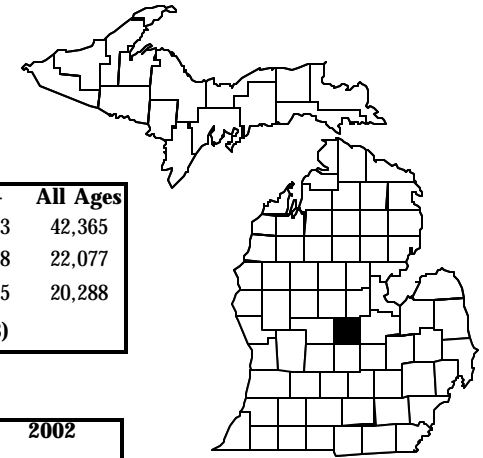
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Gratiot County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	445	2,432	2,529	2,928	3,388	3,510	2,685	2,951	3,215	3,327	3,069	2,600	2,178	1,770	5,783	42,365
Male	218	1,018	1,267	1,523	1,735	1,944	1,640	1,754	1,833	1,812	1,670	1,349	1,080	876	2,358	22,077
Female	227	969	1,262	1,405	1,653	1,566	1,045	1,197	1,382	1,515	1,399	1,251	1,098	894	3,425	20,288
Race(%):	White (94.2)		Black (3.9)		Native American (0.6)		Asian/Pacific Islander (0.5)		Multiple Race (0.3)		Hispanic (4.3)					

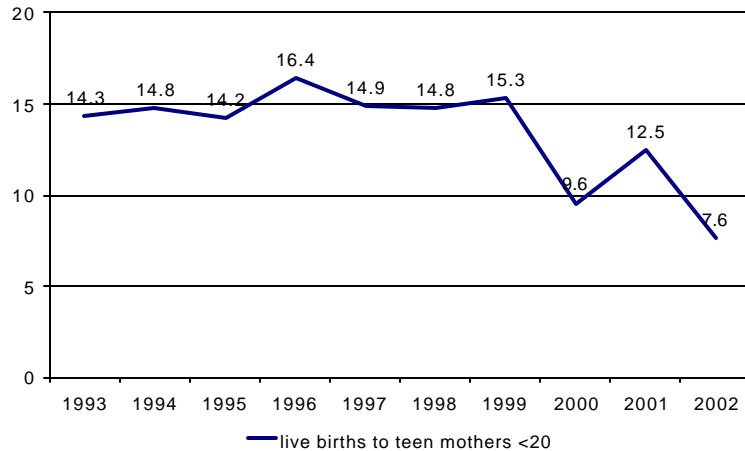
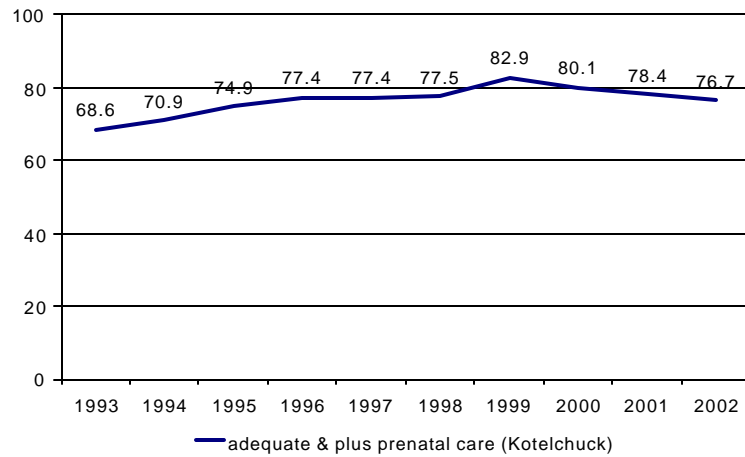
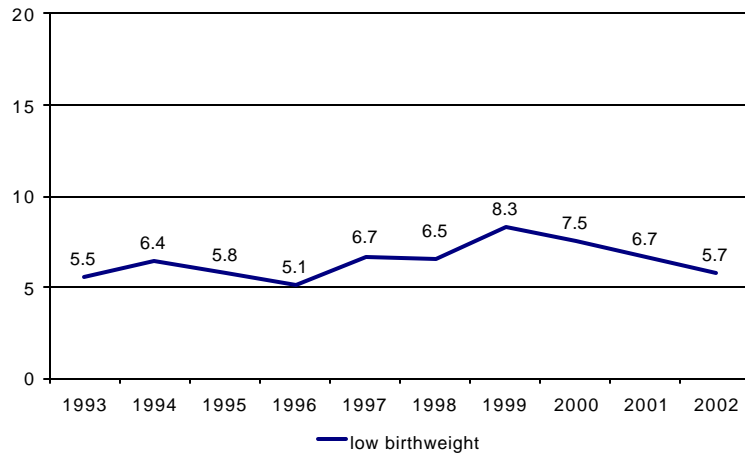
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	547	515	501	470	509	507	509	534	481	472
White	544	511	494	466	507	501	503	528	474	447
Black	1	1	---	3	1	---	2	2	---	5
American Indian	1	---	4	---	---	3	1	---	1	1
Asian & P.I.	1	3	2	---	1	3	---	3	5	6

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	1.1	6	1.2	4	---	7	1.5	8	1.6	3	---	4	---	9	1.7	4	---	5	---
1,500-2,499	24	4.4	27	5.2	25	5.0	17	3.6	26	5.1	30	5.9	38	7.5	31	5.8	28	5.8	22	4.7
Total < 2500	30	5.5	33	6.4	29	5.8	24	5.1	34	6.7	33	6.5	42	8.3	40	7.5	32	6.7	27	5.7
Preterm																				
Preterm < 37 weeks	52	9.5	54	10.5	46	9.2	45	9.6	58	11.4	62	12.2	58	11.4	46	8.6	44	9.1	46	9.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	375	68.6	365	70.9	375	74.9	364	77.4	394	77.4	393	77.5	422	82.9	428	80.1	377	78.4	362	76.7
Live Births to Teen Mothers																				
< 18	35	6.4	26	5.0	22	4.4	27	5.7	19	3.7	17	3.4	22	4.3	15	2.8	16	3.3	8	1.7
18-19	43	7.9	50	9.7	49	9.8	50	10.6	57	11.2	58	11.4	56	11.0	36	6.7	44	9.1	28	5.9
Total under 20	78	14.3	76	14.8	71	14.2	77	16.4	76	14.9	75	14.8	78	15.3	51	9.6	60	12.5	36	7.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	4	---	4	---	6	---	5	---	3	---	6	---	2	---	1	---	3	---	5	---
Infant deaths	6	11.0	4	---	3	---	6	12.8	5	---	4	---	3	---	5	---	1	---	3	---
Neonatal	5	---	2	---	2	---	5	---	4	---	3	---	2	---	5	---	1	---	2	---
Postneonatal	1	---	2	---	1	---	1	---	1	---	1	---	1	---	0	---	0	---	1	---
Age one to nine	3	---	0	---	5	---	2	---	1	---	0	---	2	---	0	---	2	---	0	---
Age ten to nineteen	4	---	7	---	4	---	1	---	1	---	2	---	3	---	1	---	3	---	0	---

*If number is less than 6, the rate is not calculated.

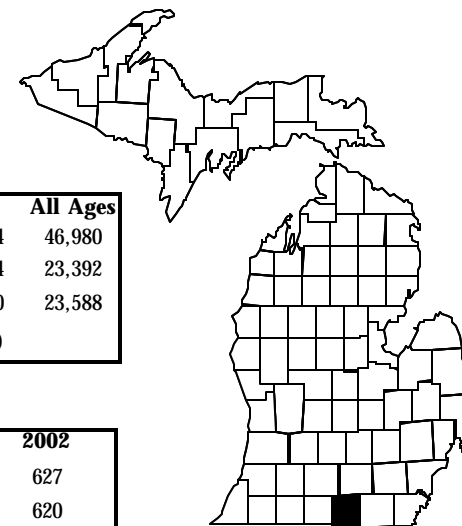
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Hillsdale County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	588	2,992	2,996	3,579	3,873	3,501	2,478	2,793	3,199	3,627	3,542	3,159	2,630	2,267	6,344	46,980
Male	310	1,216	1,533	1,844	2,057	1,808	1,293	1,424	1,633	1,808	1,777	1,554	1,298	1,143	2,694	23,392
Female	278	1,188	1,463	1,735	1,816	1,693	1,185	1,369	1,566	1,819	1,765	1,605	1,332	1,124	3,650	23,588
Race(%):	White (98.1)		Black (0.5)		Native American (0.4)		Asian/Pacific Islander (0.4)		Multiple Race (0.7)		Hispanic (1.3)					

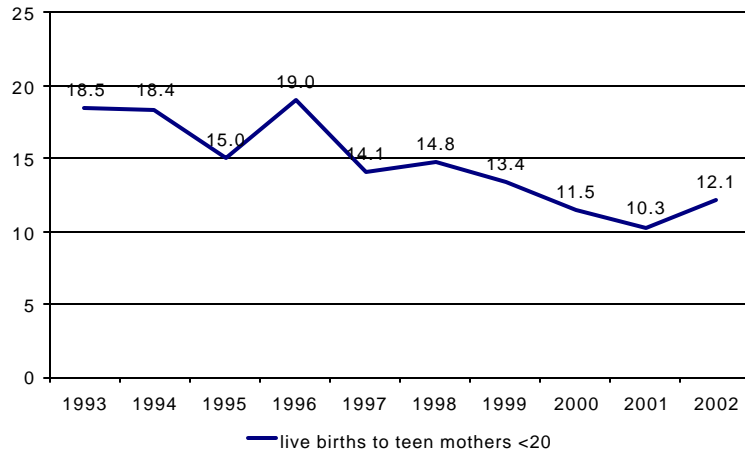
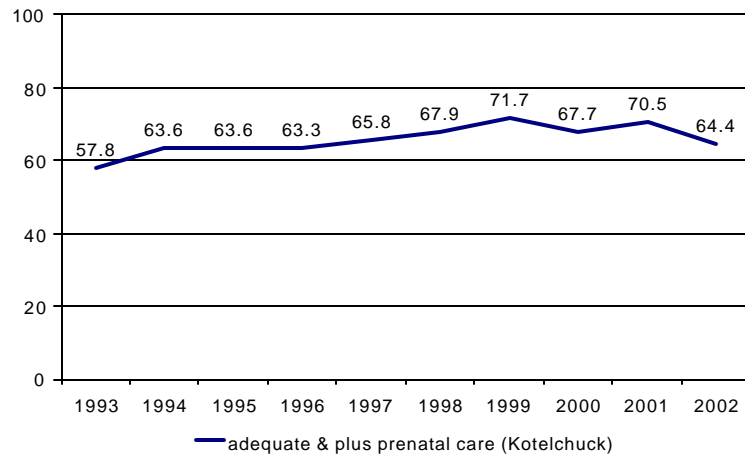
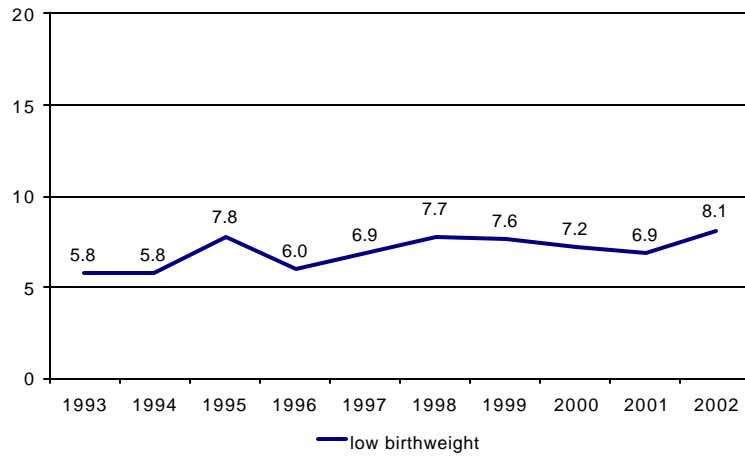
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	607	582	566	562	567	582	621	643	613	627
White	601	575	559	553	563	574	614	630	605	620
Black	---	---	1	1	---	1	---	3	2	1
American Indian	1	5	3	3	2	5	2	3	2	1
Asian & P.I.	4	2	3	3	1	1	3	5	4	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	5	---	4	---	9	1.6	8	1.4	4	---	12	1.9	7	1.1	7	1.1	8	1.3
1,500-2,499	31	5.1	29	5.0	40	7.1	25	4.4	31	5.5	41	7.0	35	5.6	39	6.1	35	5.7	43	6.9
Total < 2500	35	5.8	34	5.8	44	7.8	34	6.0	39	6.9	45	7.7	47	7.6	46	7.2	42	6.9	51	8.1
Preterm																				
Preterm < 37 weeks	57	9.4	61	10.5	59	10.4	35	6.2	56	9.9	49	8.4	61	9.8	76	11.8	51	8.3	70	11.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	351	57.8	370	63.6	360	63.6	356	63.3	373	65.8	395	67.9	445	71.7	435	67.7	432	70.5	404	64.4
Live Births to Teen Mothers																				
< 18	38	6.3	33	5.7	26	4.6	30	5.3	27	4.8	31	5.3	26	4.2	15	2.3	22	3.6	18	2.9
18-19	74	12.2	74	12.7	59	10.4	77	13.7	53	9.3	55	9.5	57	9.2	59	9.2	41	6.7	58	9.3
Total under 20	112	18.5	107	18.4	85	15.0	107	19.0	80	14.1	86	14.8	83	13.4	74	11.5	63	10.3	76	12.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	6	---	6	---	4	---	5	---	4	---	5	---	4	---	3	---	4	---	3	---
Infant deaths	2	---	9	15.5	3	---	3	---	4	---	4	---	7	11.3	5	---	4	---	2	---
Neonatal	1	---	4	---	2	---	2	---	2	---	2	---	6	9.7	3	---	2	---	2	---
Postneonatal	1	---	5	---	1	---	1	---	2	---	2	---	1	---	2	---	2	---	0	---
Age one to nine	5	---	4	---	2	---	0	---	4	---	1	---	2	---	3	---	1	---	0	---
Age ten to nineteen	6	---	6	---	6	---	5	---	6	---	4	---	4	---	4	---	5	---	4	---

*If number is less than 6, the rate is not calculated.

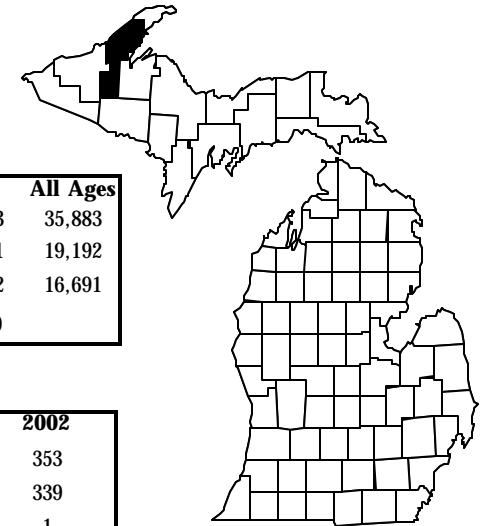
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Houghton County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	381	1,911	1,933	2,239	3,520	4,839	2,235	1,726	2,034	2,261	2,364	2,184	1,795	1,569	5,273	35,883
Male	199	809	995	1,130	2,108	3,087	1,336	963	1,056	1,133	1,229	1,143	880	793	2,331	19,192
Female	182	721	938	1,109	1,412	1,752	899	763	978	1,128	1,135	1,041	915	776	2,942	16,691
Race(%):	White (96.2)		Black (1.0)		Native American (0.5)		Asian/Pacific Islander (1.7)		Multiple Race (0.7)		Hispanic (0.7)					

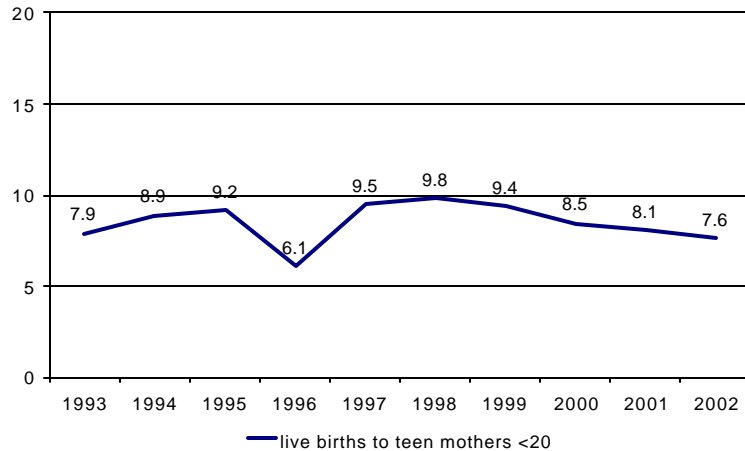
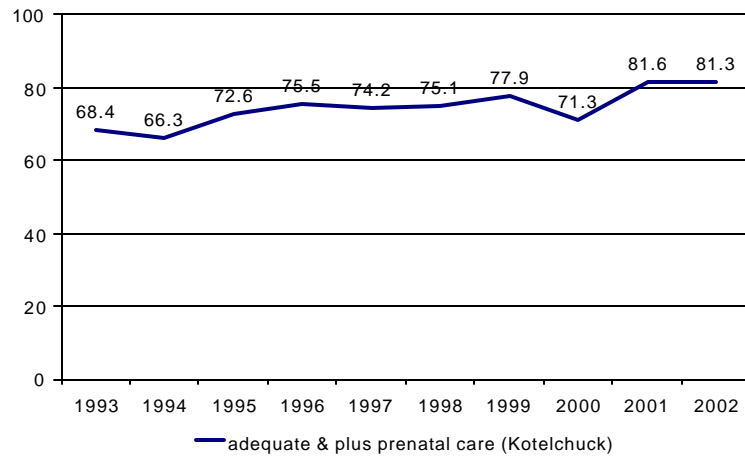
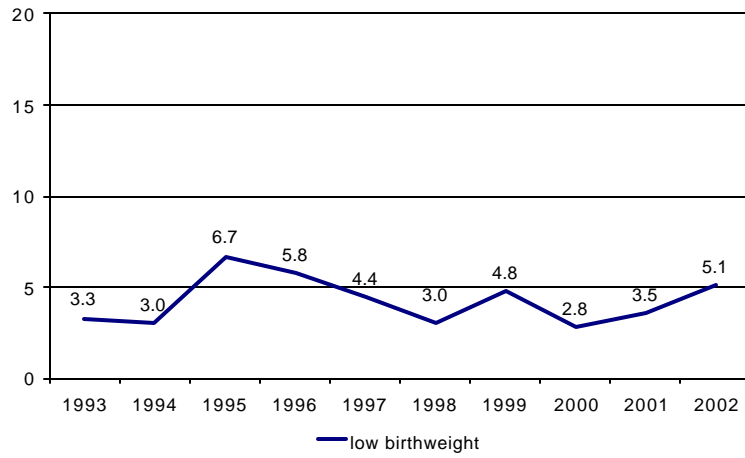
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	367	395	434	379	388	366	416	390	396	353
White	349	378	417	352	371	355	401	369	384	339
Black	3	3	1	2	---	4	3	4	---	1
American Indian	5	3	2	5	4	2	3	3	2	4
Asian & P.I.	10	11	14	19	13	5	8	14	9	7

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	3	---	1	---	1	---	6	1.6	2	---	3	---	4	---	3	---	2	---	4	---
1,500-2,499	9	2.5	11	2.8	28	6.5	16	4.2	15	3.9	8	2.2	16	3.8	8	2.1	12	3.0	14	4.0
Total < 2500	12	3.3	12	3.0	29	6.7	22	5.8	17	4.4	11	3.0	20	4.8	11	2.8	14	3.5	18	5.1
Preterm																				
Preterm < 37 weeks	21	5.7	22	5.6	34	7.8	31	8.2	25	6.4	28	7.7	28	6.7	19	4.9	32	8.1	32	9.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	251	68.4	262	66.3	315	72.6	286	75.5	288	74.2	275	75.1	324	77.9	278	71.3	323	81.6	287	81.3
Live Births to Teen Mothers																				
< 18	8	2.2	11	2.8	6	1.4	7	1.8	10	2.6	10	2.7	16	3.8	4	---	7	1.8	5	---
18-19	21	5.7	24	6.1	34	7.8	16	4.2	27	7.0	26	7.1	23	5.5	29	7.4	25	6.3	22	6.2
Total under 20	29	7.9	35	8.9	40	9.2	23	6.1	37	9.5	36	9.8	39	9.4	33	8.5	32	8.1	27	7.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	3	---	3	---	4	---	2	---	2	---	3	---	3	---	1	---	5	---
Infant deaths	2	---	1	---	1	---	3	---	2	---	3	---	4	---	1	---	0	---	3	---
Neonatal	1	---	1	---	1	---	2	---	1	---	2	---	4	---	1	---	0	---	1	---
Postneonatal	1	---	0	---	0	---	1	---	1	---	1	---	0	---	0	---	0	---	2	---
Age one to nine	1	---	1	---	3	---	0	---	0	---	1	---	1	---	1	---	0	---	1	---
Age ten to nineteen	2	---	3	---	2	---	0	---	5	---	2	---	3	---	0	---	1	---	3	---

*If number is less than 6, the rate is not calculated.

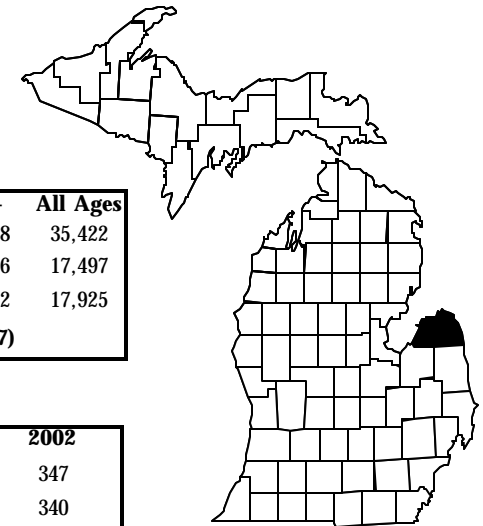
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Huron County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	371	1,879	2,114	2,571	2,602	1,787	1,471	1,930	2,298	2,731	2,717	2,437	1,989	1,918	6,978	35,422
Male	164	742	1,098	1,292	1,359	977	746	950	1,199	1,373	1,413	1,232	962	924	3,066	17,497
Female	207	766	1,016	1,279	1,243	810	725	980	1,099	1,358	1,304	1,205	1,027	994	3,912	17,925
Race(%):	White (98.4)		Black (0.2)		Native American (0.3)		Asian/Pacific Islander (0.4)		Multiple Race (0.7)		Hispanic (1.7)					

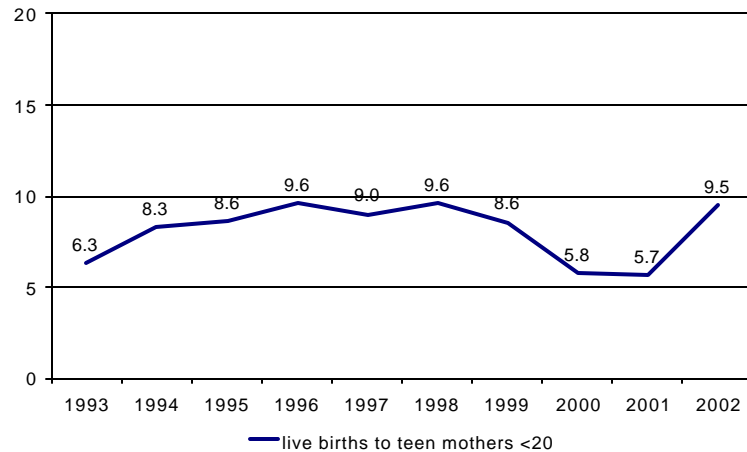
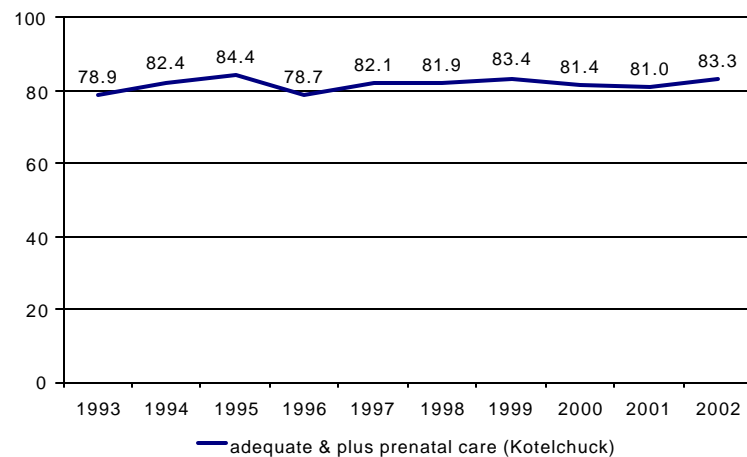
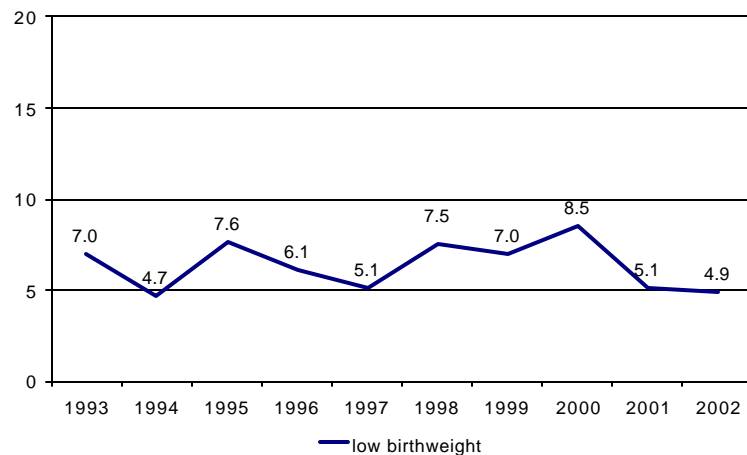
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	384	448	384	394	390	386	374	398	336	347
White	380	442	376	388	380	377	363	389	332	340
Black	1	---	1	---	2	---	2	---	---	1
American Indian	2	---	2	4	3	3	3	5	---	4
Asian & P.I.	1	3	3	1	5	6	5	4	4	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	1.6	2	---	8	2.1	7	1.8	5	---	5	---	6	1.6	6	1.5	5	---	3	---
1,500-2,499	21	5.5	19	4.2	21	5.5	17	4.3	15	3.8	24	6.2	20	5.3	28	7.0	12	3.6	14	4.0
Total < 2500	27	7.0	21	4.7	29	7.6	24	6.1	20	5.1	29	7.5	26	7.0	34	8.5	17	5.1	17	4.9
Preterm																				
Preterm < 37 weeks	34	8.9	33	7.4	35	9.1	39	9.9	40	10.3	46	11.9	36	9.6	46	11.6	21	6.3	42	12.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	303	78.9	369	82.4	324	84.4	310	78.7	320	82.1	316	81.9	312	83.4	324	81.4	272	81.0	289	83.3
Live Births to Teen Mothers																				
< 18	9	2.3	13	2.9	10	2.6	9	2.3	12	3.1	5	---	8	2.1	6	1.5	4	---	7	2.0
18-19	15	3.9	24	5.4	23	6.0	29	7.4	23	5.9	32	8.3	24	6.4	17	4.3	15	4.5	26	7.5
Total under 20	24	6.3	37	8.3	33	8.6	38	9.6	35	9.0	37	9.6	32	8.6	23	5.8	19	5.7	33	9.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	2	---	2	---	5	---	2	---	2	---	1	---	0	---	2	---	0	---
Infant deaths	3	---	2	---	0	---	6	15.2	1	---	2	---	1	---	4	---	3	---	2	---
Neonatal	2	---	1	---	0	---	2	---	1	---	1	---	0	---	3	---	3	---	2	---
Postneonatal	1	---	1	---	0	---	4	---	0	---	1	---	1	---	1	---	0	---	0	---
Age one to nine	0	---	2	---	1	---	0	---	2	---	2	---	1	---	2	---	2	---	1	---
Age ten to nineteen	1	---	3	---	5	---	3	---	1	---	5	---	5	---	4	---	1	---	0	---

*If number is less than 6, the rate is not calculated.

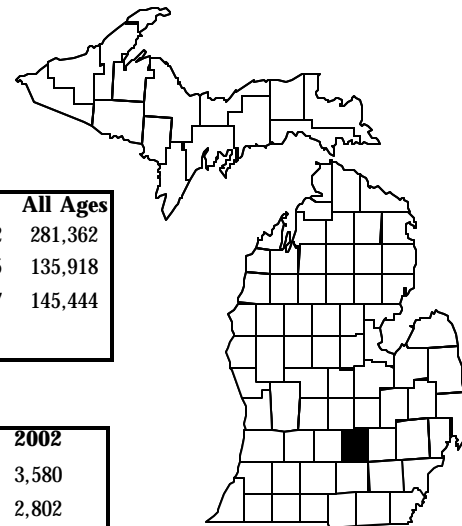
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Ingham County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	3,832	18,322	17,736	18,681	25,123	34,095	22,201	19,732	18,769	19,804	19,697	18,048	13,321	9,051	26,782	281,362
Male	1,968	7,461	8,994	9,574	12,187	16,395	11,308	9,869	9,163	9,479	9,302	8,654	6,457	4,302	10,805	135,918
Female	1,864	7,029	8,742	9,107	12,936	17,700	10,893	9,863	9,606	10,325	10,395	9,394	6,864	4,749	15,977	145,444
Race(%):	White (81.7)		Black (11.2)		Native American (0.6)		Asian/Pacific Islander (4.1)		Multiple Race (4.1)		Hispanic (6.0)					

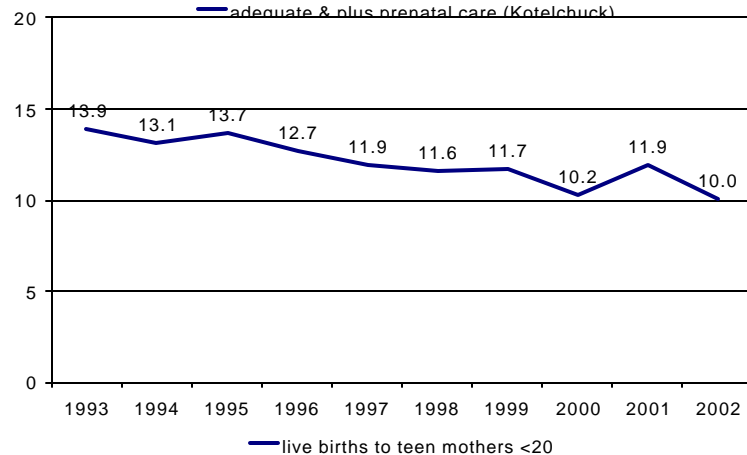
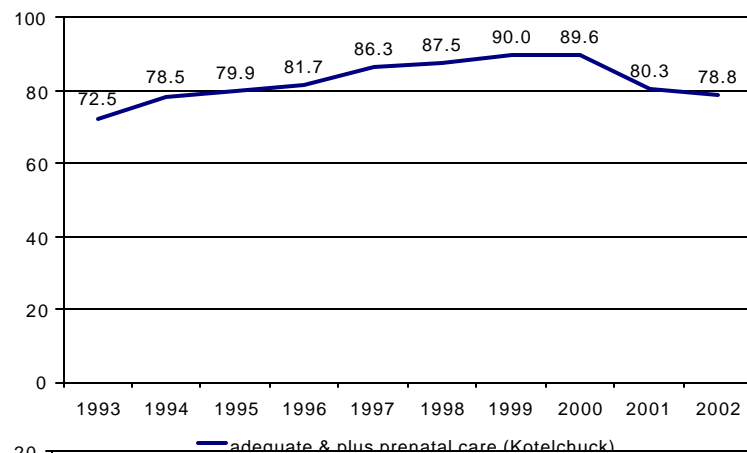
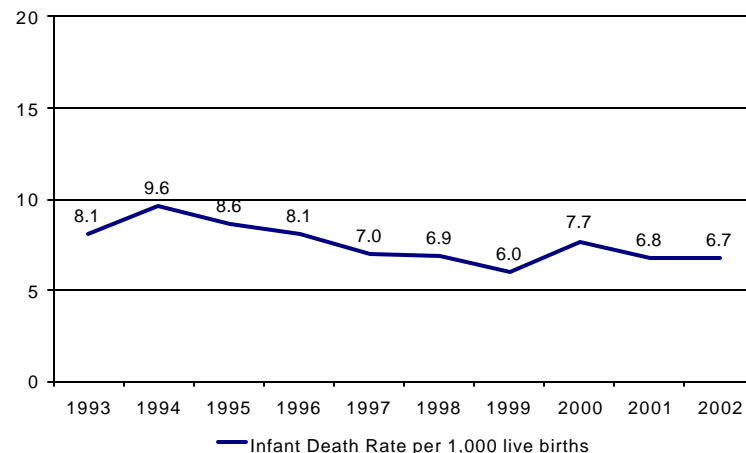
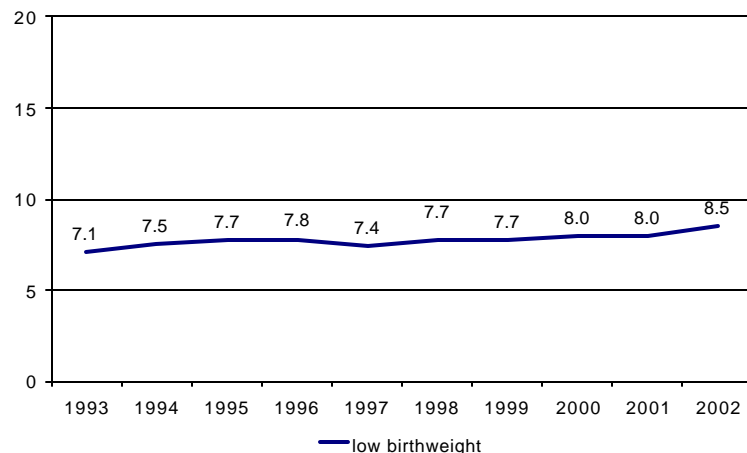
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	4,056	4,051	3,856	3,952	3,989	3,777	3,672	3,776	3,702	3,580
White	3,276	3,222	3,008	3,118	3,141	3,000	2,883	2,872	2,900	2,802
Black	648	600	608	593	646	586	600	672	591	573
American Indian	23	26	24	21	16	15	12	10	11	27
Asian & P.I.	98	197	206	210	182	172	172	215	195	171

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	49	1.2	58	1.4	50	1.3	61	1.5	53	1.3	53	1.4	45	1.2	63	1.7	38	1.0	62	1.7
1,500-2,499	239	5.9	246	6.1	247	6.4	246	6.2	244	6.1	238	6.3	239	6.5	238	6.3	257	6.9	244	6.8
Total < 2500	288	7.1	304	7.5	297	7.7	307	7.8	297	7.4	291	7.7	284	7.7	301	8.0	295	8.0	306	8.5
Preterm																				
Preterm < 37 weeks	414	10.2	422	10.4	368	9.5	403	10.2	420	10.5	395	10.5	400	10.9	403	10.7	429	11.6	430	12.0
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	2,939	72.5	3,179	78.5	3,080	79.9	3,230	81.7	3,441	86.3	3,303	87.5	3,303	90.0	3,383	89.6	2,973	80.3	2,820	78.8
Live Births to Teen Mothers																				
< 18	241	5.9	206	5.1	214	5.5	209	5.3	176	4.4	158	4.2	151	4.1	141	3.7	152	4.1	116	3.2
18-19	324	8.0	323	8.0	313	8.1	291	7.4	298	7.5	282	7.5	277	7.5	246	6.5	289	7.8	243	6.8
Total under 20	565	13.9	529	13.1	527	13.7	500	12.7	474	11.9	440	11.6	428	11.7	387	10.2	441	11.9	359	10.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	28	---	7	---	37	---	31	---	24	---	24	---	20	---	17	---	23	---	29	---
Infant deaths	33	8.1	39	9.6	33	8.6	32	8.1	28	7.0	26	6.9	22	6.0	29	7.7	25	6.8	24	6.7
Neonatal	21	5.2	23	5.7	18	4.7	22	5.6	15	3.8	19	5.0	16	4.4	19	5.0	19	5.1	19	5.3
Postneonatal	12	3.0	16	3.9	15	3.9	10	2.5	13	3.3	7	1.9	6	1.6	10	2.6	6	1.6	5	---
Age one to nine	11	---	13	---	4	---	6	---	2	---	10	---	8	---	7	---	4	---	7	---
Age ten to nineteen	20	---	16	---	15	---	14	---	15	---	13	---	14	---	14	---	17	---	10	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.5	2.1	1.4	Maternal health/prematurity
1500g+	Fetal	1.6	1.1	0.5	Maternal care
	Neonatal	1.6	1.2	0.4	Newborn care
	Postneonatal	1.6	1.0	0.6	Infant health
Total		8.3	5.4	2.9	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

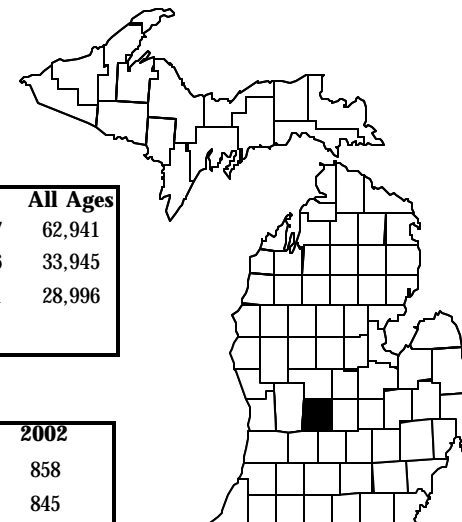
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Ionia County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	715	3,992	4,384	4,710	5,115	5,754	4,470	4,469	4,904	5,104	4,630	3,903	2,980	2,239	6,287	62,941
Male	357	1,678	2,211	2,370	2,813	3,947	2,742	2,507	2,708	2,754	2,453	2,077	1,496	1,126	2,706	33,945
Female	358	1,599	2,173	2,340	2,302	1,807	1,728	1,962	2,196	2,350	2,177	1,826	1,484	1,113	3,581	28,996
Race(%):	White (92.9)		Black (4.8)		Native American (0.6)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (2.2)		Hispanic (2.7)					

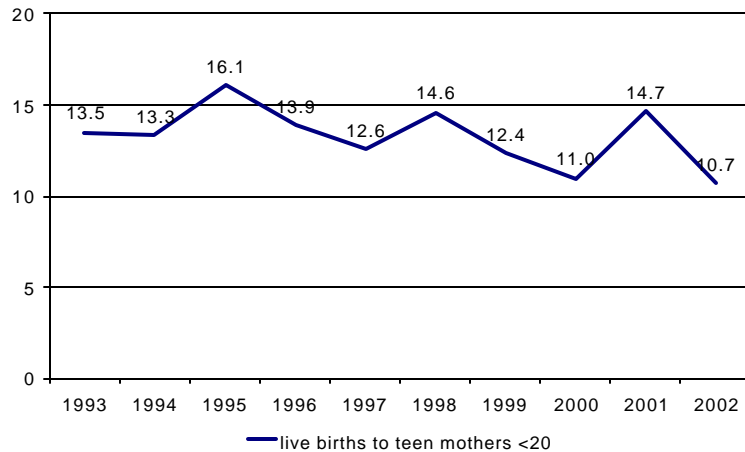
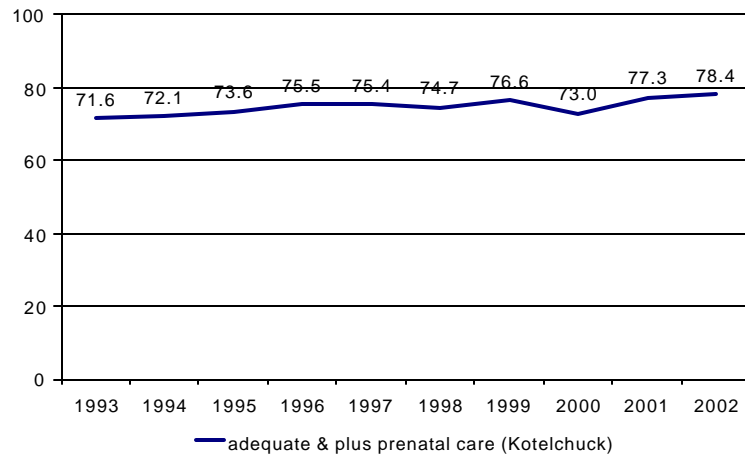
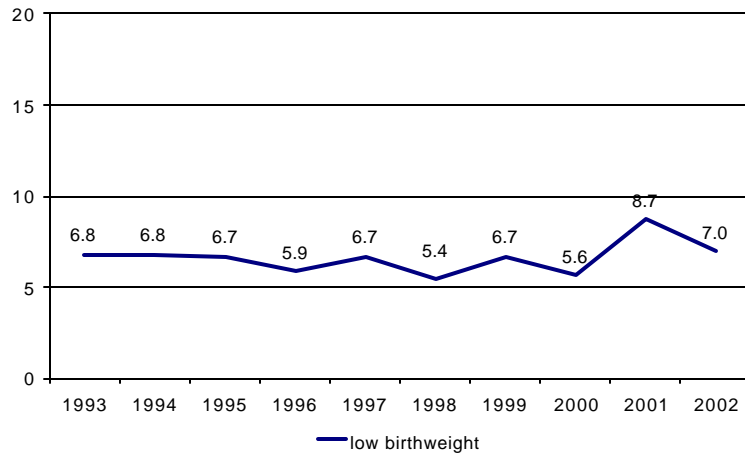
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	806	818	831	820	780	821	809	856	812	858
White	792	797	815	808	773	812	804	843	804	845
Black	5	3	4	2	---	3	3	3	4	4
American Indian	5	5	8	6	4	3	1	2	2	2
Asian & P.I.	3	10	4	4	2	3	1	6	2	5

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	12	1.5	8	1.0	9	1.1	10	1.2	6	0.8	6	0.7	11	1.4	12	1.4	11	1.4	13	1.5
1,500-2,499	43	5.3	48	5.9	47	5.7	38	4.6	46	5.9	38	4.6	43	5.3	36	4.2	60	7.4	47	5.5
Total < 2500	55	6.8	56	6.8	56	6.7	48	5.9	52	6.7	44	5.4	54	6.7	48	5.6	71	8.7	60	7.0
Preterm																				
Preterm < 37 weeks	67	8.3	82	10.0	88	10.6	87	10.6	83	10.6	70	8.5	93	11.5	89	10.4	96	11.8	107	12.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	577	71.6	590	72.1	612	73.6	619	75.5	588	75.4	613	74.7	620	76.6	625	73.0	628	77.3	673	78.4
Live Births to Teen Mothers																				
< 18	34	4.2	32	3.9	46	5.5	46	5.6	37	4.7	34	4.1	33	4.1	23	2.7	41	5.0	29	3.4
18-19	75	9.3	77	9.4	88	10.6	68	8.3	61	7.8	86	10.5	67	8.3	71	8.3	78	9.6	63	7.3
Total under 20	109	13.5	109	13.3	134	16.1	114	13.9	98	12.6	120	14.6	100	12.4	94	11.0	119	14.7	92	10.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	6	---	3	---	2	---	4	---	3	---	6	---	7	---	3	---	3	---
Infant deaths	8	9.9	5	---	6	7.2	5	---	7	9.0	2	---	4	---	8	9.3	7	8.6	6	7.0
Neonatal	4	---	2	---	3	---	4	---	5	---	1	---	2	---	6	7.0	4	---	5	---
Postneonatal	4	---	3	---	3	---	1	---	2	---	1	---	2	---	2	---	3	---	1	---
Age one to nine	4	---	3	---	1	---	1	---	2	---	0	---	2	---	6	---	3	---	0	---
Age ten to nineteen	2	---	3	---	2	---	7	---	5	---	2	---	2	---	7	---	8	---	2	---

*If number is less than 6, the rate is not calculated.

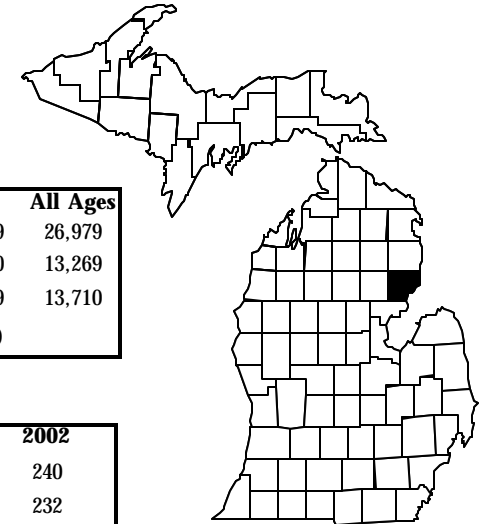
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Iosco County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	288	1,317	1,420	1,862	1,850	1,186	1,011	1,276	1,623	2,072	1,944	1,766	1,864	1,789	5,999	26,979
Male	145	549	703	935	980	606	498	628	796	1,037	941	887	903	901	2,760	13,269
Female	143	480	717	927	870	580	513	648	827	1,035	1,003	879	961	888	3,239	13,710
Race(%):	White (97.2)		Black (0.7)		Native American (0.7)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (0.9)		City(%):		Hispanic (0.9)			

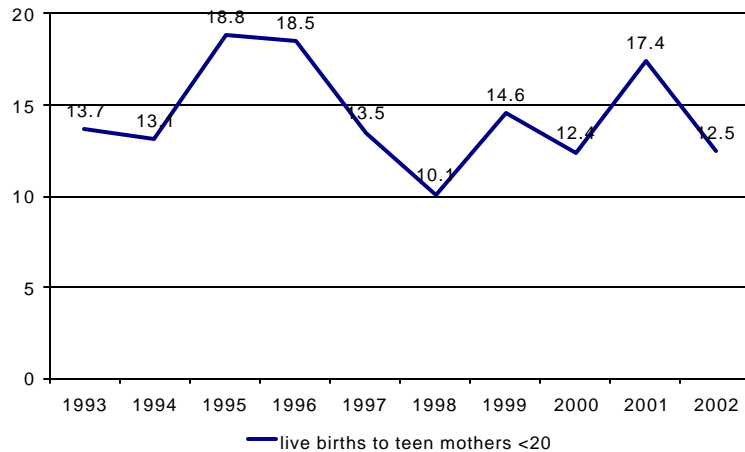
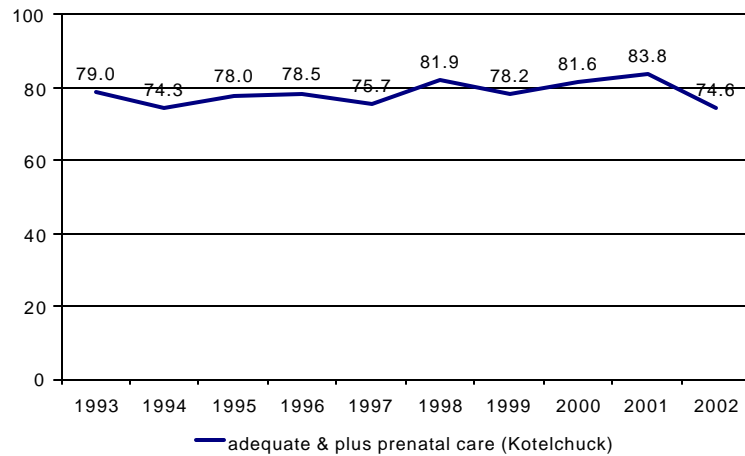
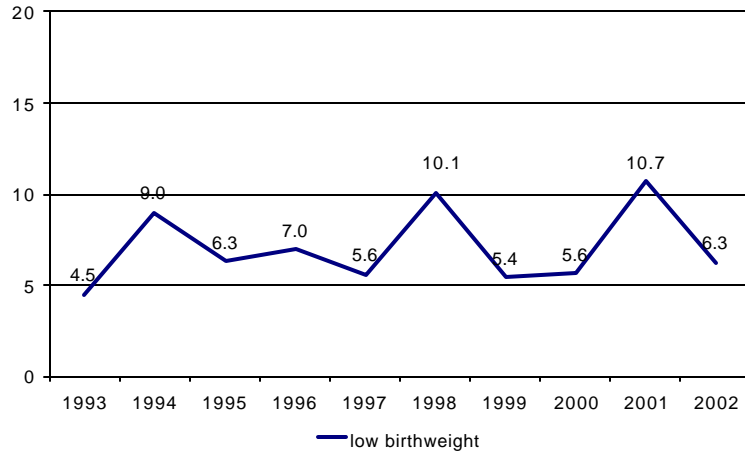
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	291	268	287	270	251	288	261	266	253	240
White	287	260	279	256	245	281	257	261	243	232
Black	2	1	1	3	---	1	---	2	2	1
American Indian	1	3	2	7	3	2	3	---	1	3
Asian & P.I.	1	3	4	4	3	3	1	2	5	4

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	6	2.2	3	---	4	---	1	---	6	2.1	1	---	2	---	5	---	2	---
1,500-2,499	11	3.8	18	6.7	15	5.2	15	5.6	13	5.2	23	8.0	13	5.0	13	4.9	22	8.7	13	5.4
Total < 2500	13	4.5	24	9.0	18	6.3	19	7.0	14	5.6	29	10.1	14	5.4	15	5.6	27	10.7	15	6.3
Preterm																				
Preterm < 37 weeks	22	7.6	32	11.9	27	9.4	23	8.5	22	8.8	48	16.7	24	9.2	20	7.5	29	11.5	23	9.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	230	79.0	199	74.3	224	78.0	212	78.5	190	75.7	236	81.9	204	78.2	217	81.6	212	83.8	179	74.6
Live Births to Teen Mothers																				
< 18	11	3.8	13	4.9	19	6.6	10	3.7	11	4.4	7	2.4	11	4.2	11	4.1	10	4.0	9	3.8
18-19	29	10.0	22	8.2	35	12.2	40	14.8	23	9.2	22	7.6	27	10.3	22	8.3	34	13.4	21	8.8
Total under 20	40	13.7	35	13.1	54	18.8	50	18.5	34	13.5	29	10.1	38	14.6	33	12.4	44	17.4	30	12.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	2	---	3	---	0	---	2	---	2	---	2	---	2	---	2	---	0	---
Infant deaths	2	---	6	22.4	1	---	1	---	0	---	2	---	1	---	1	---	5	---	2	---
Neonatal	1	---	4	---	1	---	0	---	0	---	2	---	1	---	0	---	4	---	1	---
Postneonatal	1	---	2	---	0	---	1	---	0	---	0	---	0	---	1	---	1	---	1	---
Age one to nine	0	---	0	---	2	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---
Age ten to nineteen	3	---	2	---	2	---	1	---	1	---	1	---	0	---	2	---	2	---	5	---

*If number is less than 6, the rate is not calculated.

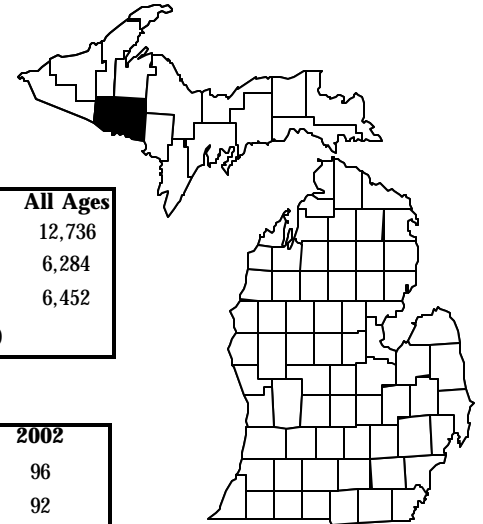
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Iron County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	55	436	623	825	855	665	482	547	775	942	1,030	908	780	679	3,189	12,736
Male	29	193	304	429	433	363	275	296	392	504	508	506	399	331	1,322	6,284
Female	26	188	319	396	422	302	207	251	383	438	522	402	381	348	1,867	6,452
Race(%):	White (97.1)		Black (1.1)		Native American (0.9)		Asian/Pacific Islander (0.2)		Multiple Race (0.7)		Hispanic (0.7)					

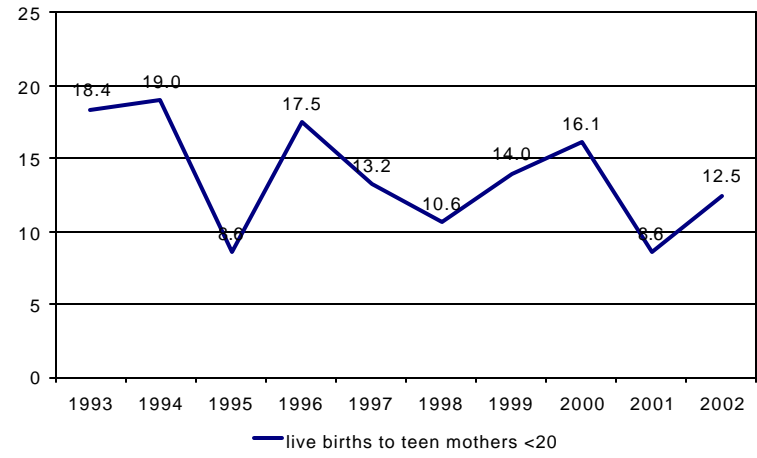
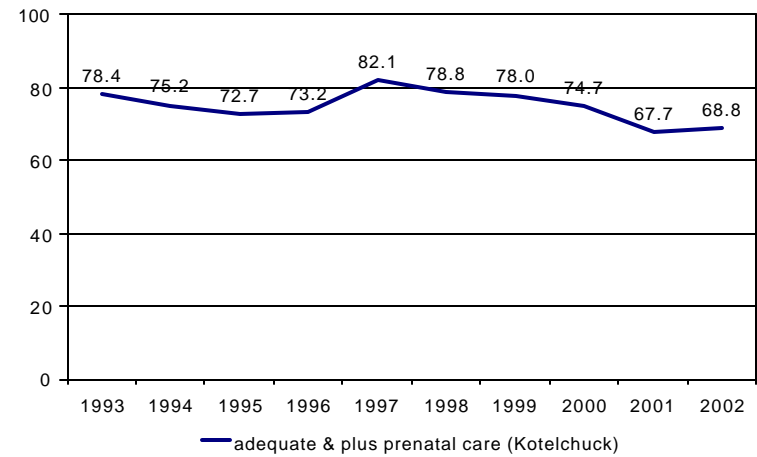
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	125	121	128	97	106	113	100	87	93	96
White	122	118	124	96	102	112	99	84	91	92
Black	---	---	---	---	---	---	---	---	---	1
American Indian	3	3	4	1	3	1	1	3	1	3
Asian & P.I.	---	---	---	---	1	---	---	---	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	0	---	3	---	1	---	2	---	0	---	0	---	1	---	2	---	0	---
1,500-2,499	4	---	7	5.8	8	6.3	9	9.3	4	---	6	5.3	3	---	1	---	7	7.5	7	7.3
Total < 2500	4	---	7	5.8	11	8.6	10	10.3	6	5.7	6	5.3	3	---	2	---	9	9.7	7	7.3
Preterm																				
Preterm < 37 weeks	7	5.6	13	10.7	18	14.1	13	13.4	9	8.5	15	13.3	9	9.0	6	6.9	12	12.9	9	9.4
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	98	78.4	91	75.2	93	72.7	71	73.2	87	82.1	89	78.8	78	78.0	65	74.7	63	67.7	66	68.8
Live Births to Teen Mothers																				
< 18	10	8.0	5	---	6	4.7	4	---	5	---	4	---	4	---	5	---	2	---	3	---
18-19	13	10.4	18	14.9	5	---	13	13.4	9	8.5	8	7.1	10	10.0	9	10.3	6	6.5	9	9.4
Total under 20	23	18.4	23	19.0	11	8.6	17	17.5	14	13.2	12	10.6	14	14.0	14	16.1	8	8.6	12	12.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	0	---	1	---	0	---	1	---	1	---	0	---	0	---	0	---
Infant deaths	0	---	0	---	0	---	0	---	0	---	0	---	1	---	2	---	0	---	0	---
Neonatal	0	---	0	---	0	---	0	---	0	---	0	---	1	---	2	---	0	---	0	---
Postneonatal	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age one to nine	1	---	0	---	3	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	0	---	0	---	0	---	1	---	0	---	4	---	1	---	1	---	1	---	3	---

*If number is less than 6, the rate is not calculated.

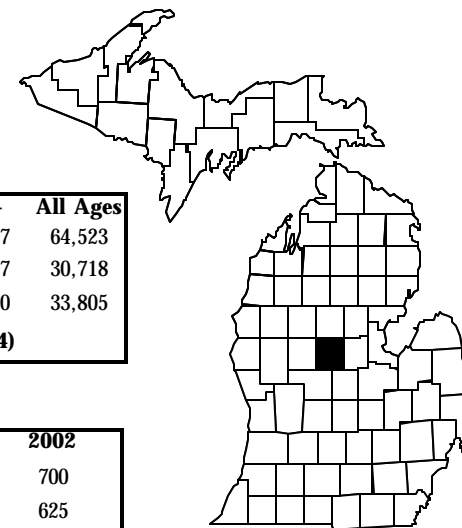
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Isabella County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	657	3,335	3,274	3,758	7,110	12,837	5,420	3,444	3,711	3,921	3,883	3,358	2,464	2,061	5,947	64,523
Male	300	1,328	1,709	1,891	3,104	5,697	2,888	1,735	1,886	1,915	1,922	1,685	1,202	999	2,457	30,718
Female	357	1,350	1,565	1,867	4,006	7,140	2,532	1,709	1,825	2,006	1,961	1,673	1,262	1,062	3,490	33,805
Race(%):	White (92.4)		Black (2.0)		Native American (2.8)		Asian/Pacific Islander (1.6)		Multiple Ethnicity (2.2)		Hispanic (2.4)					

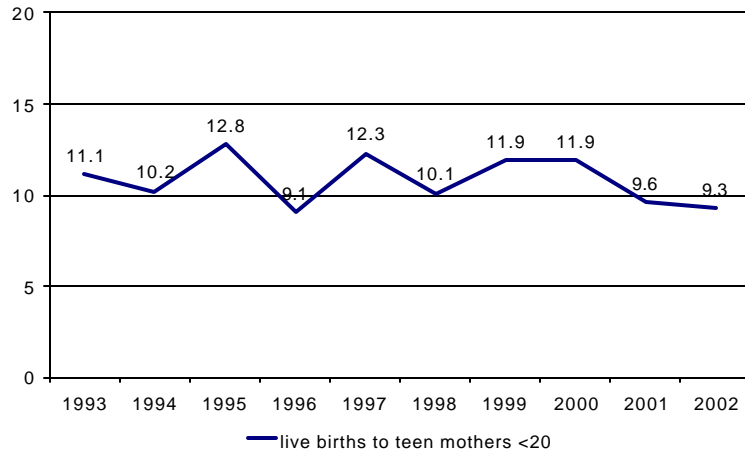
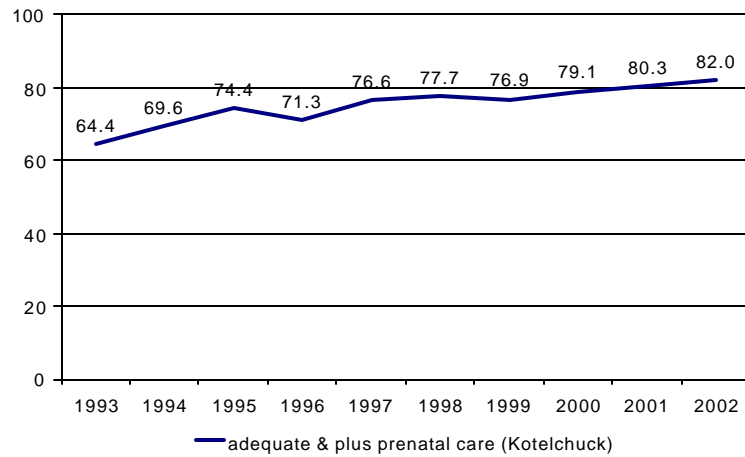
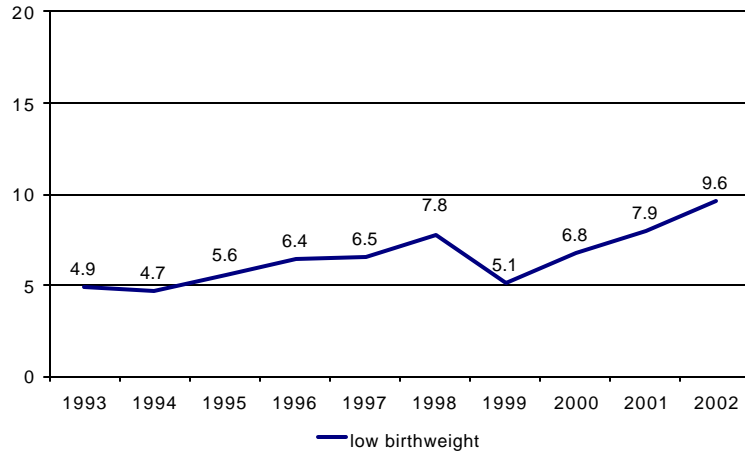
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	657	615	585	614	633	651	687	707	719	700
White	629	572	539	566	587	589	619	650	649	625
Black	6	10	9	8	9	9	13	6	25	16
American Indian	20	29	31	36	28	42	42	40	37	38
Asian & P.I.	2	4	6	3	9	11	13	11	6	14

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	0.9	4	---	6	1.0	7	1.1	7	1.1	10	1.5	8	1.2	12	1.7	14	1.9	15	2.1
1,500-2,499	26	4.0	25	4.1	27	4.6	32	5.2	34	5.4	41	6.3	27	3.9	36	5.1	43	6.0	52	7.4
Total < 2500	32	4.9	29	4.7	33	5.6	39	6.4	41	6.5	51	7.8	35	5.1	48	6.8	57	7.9	67	9.6
Preterm																				
Preterm < 37 weeks	53	8.1	51	8.3	50	8.5	50	8.1	80	12.6	79	12.1	70	10.2	70	9.9	94	13.1	90	12.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	423	64.4	428	69.6	435	74.4	438	71.3	485	76.6	506	77.7	528	76.9	559	79.1	577	80.3	574	82.0
Live Births to Teen Mothers																				
< 18	27	4.1	16	2.6	22	3.8	25	4.1	21	3.3	24	3.7	23	3.3	27	3.8	10	1.4	14	2.0
18-19	46	7.0	47	7.6	53	9.1	31	5.0	57	9.0	42	6.5	59	8.6	57	8.1	59	8.2	51	7.3
Total under 20	73	11.1	63	10.2	75	12.8	56	9.1	78	12.3	66	10.1	82	11.9	84	11.9	69	9.6	65	9.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	2	---	2	---	4	---	4	---	4	---	1	---	5	---	0	---	6	---
Infant deaths	5	---	6	9.8	5	---	4	---	1	---	5	---	5	---	5	---	10	13.9	7	10.0
Neonatal	3	---	5	---	4	---	1	---	0	---	3	---	4	---	4	---	8	11.1	4	---
Postneonatal	2	---	1	---	1	---	3	---	1	---	2	---	1	---	1	---	2	---	3	---
Age one to nine	2	---	3	---	2	---	0	---	0	---	2	---	0	---	0	---	0	---	1	---
Age ten to nineteen	2	---	6	---	5	---	5	---	8	---	6	---	2	---	3	---	3	---	5	---

*If number is less than 6, the rate is not calculated.

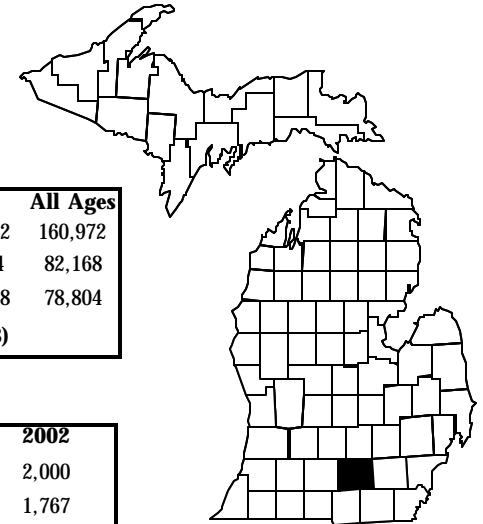
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Jackson County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,965	10,139	11,027	12,330	10,999	10,163	9,495	11,540	12,454	13,475	12,733	10,956	8,662	6,457	20,542	160,972
Male	1,028	4,240	5,640	6,369	5,609	5,266	5,204	6,242	6,727	7,298	6,673	5,692	4,372	3,154	8,654	82,168
Female	937	3,934	5,387	5,961	5,390	4,897	4,291	5,298	5,727	6,177	6,060	5,264	4,290	3,303	11,888	78,804
Race(%):	White (89.8)		Black (7.8)		Native American (0.4)		Asian/Pacific Islander (0.6)		Multiple Ethnicity (1.5)		Hispanic (2.3)					

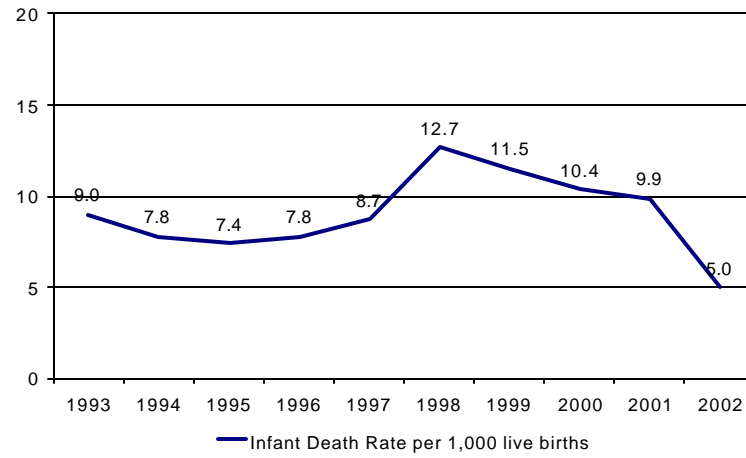
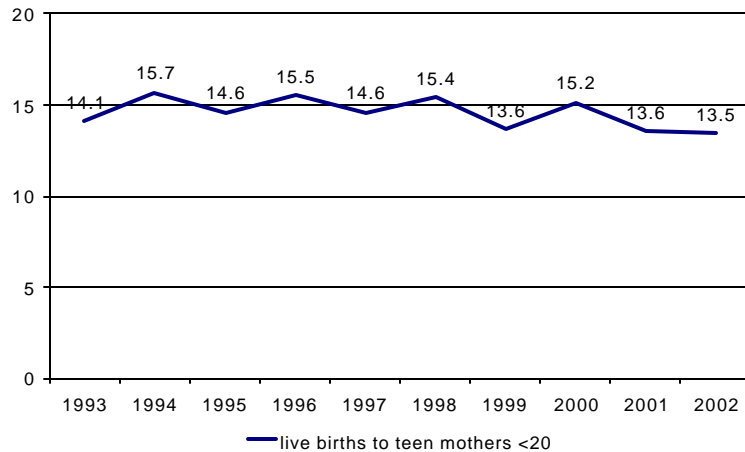
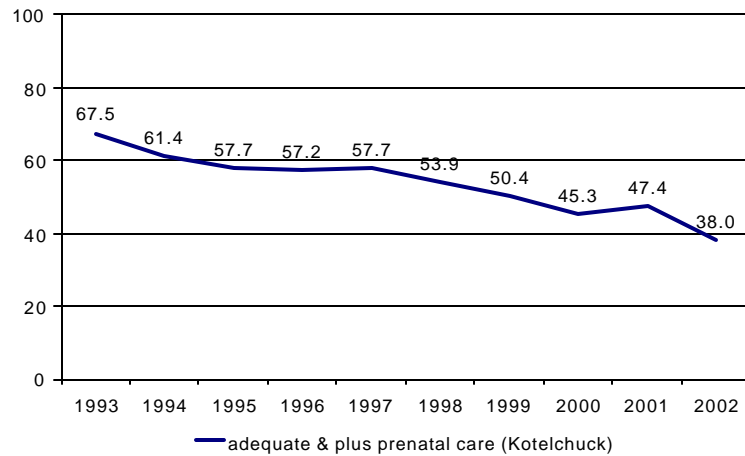
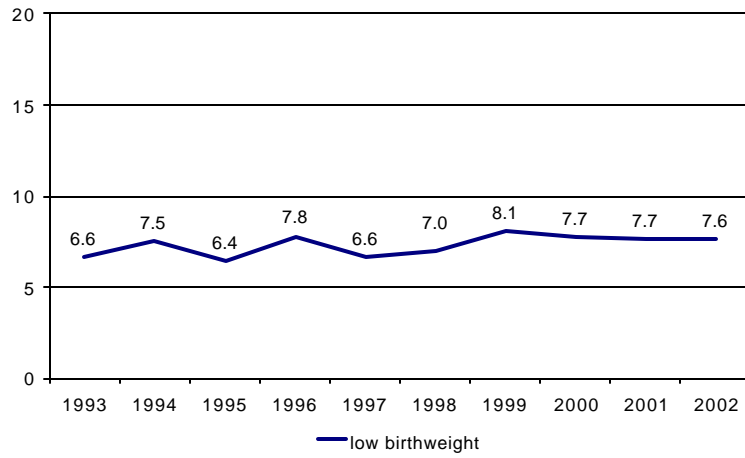
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	2,106	2,063	2,156	2,058	2,072	2,052	1,996	2,125	2,023	2,000
White	1,899	1,824	1,928	1,823	1,871	1,837	1,776	1,897	1,811	1,767
Black	185	206	186	192	166	186	173	185	174	173
American Indian	9	7	11	10	7	6	11	8	3	7
Asian & P.I.	8	12	14	19	15	15	20	21	24	37

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	29	1.4	37	1.8	32	1.5	38	1.8	25	1.2	32	1.6	36	1.8	34	1.6	30	1.5	27	1.4
1,500-2,499	109	5.2	118	5.7	105	4.9	122	5.9	111	5.4	111	5.4	125	6.3	130	6.1	125	6.2	125	6.3
Total < 2500	138	6.6	155	7.5	137	6.4	160	7.8	136	6.6	143	7.0	161	8.1	164	7.7	155	7.7	152	7.6
Preterm																				
Preterm < 37 weeks	183	8.7	200	9.7	169	7.8	207	10.1	179	8.6	209	10.2	171	8.6	186	8.8	220	10.9	209	10.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,422	67.5	1,266	61.4	1,244	57.7	1,177	57.2	1,195	57.7	1,107	53.9	1,005	50.4	962	45.3	959	47.4	759	38.0
Live Births to Teen Mothers																				
< 18	117	5.6	146	7.1	130	6.0	119	5.8	118	5.7	110	5.4	98	4.9	102	4.8	102	5.0	91	4.6
18-19	179	8.5	177	8.6	184	8.5	200	9.7	185	8.9	207	10.1	174	8.7	220	10.4	173	8.6	178	8.9
Total under 20	296	14.1	323	15.7	314	14.6	319	15.5	303	14.6	317	15.4	272	13.6	322	15.2	275	13.6	269	13.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	19	---	13	---	16	---	8	---	7	---	14	---	15	---	11	---	14	---	13	---
Infant deaths	19	9.0	16	7.8	16	7.4	16	7.8	18	8.7	26	12.7	23	11.5	22	10.4	20	9.9	10	5.0
Neonatal	13	6.2	13	6.3	11	5.1	11	5.3	15	7.2	18	8.8	15	7.5	14	6.6	13	6.4	5	---
Postneonatal	6	2.8	3	---	5	---	5	---	3	---	8	3.9	8	4.0	8	3.8	7	3.5	5	---
Age one to nine	7	---	10	---	4	---	7	---	7	---	6	---	5	---	4	---	5	---	1	---
Age ten to nineteen	8	---	11	---	6	---	9	---	11	---	9	---	9	---	6	---	8	---	11	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		5.1	2.1	3.0	Maternal health/prematurity
1500g+	Fetal	1.9	1.1	0.8	Maternal care
	Neonatal	1.3	1.2	0.1	Newborn care
	Postneonatal	2.3	1.0	1.3	Infant health
Total		10.6	5.4	5.2	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

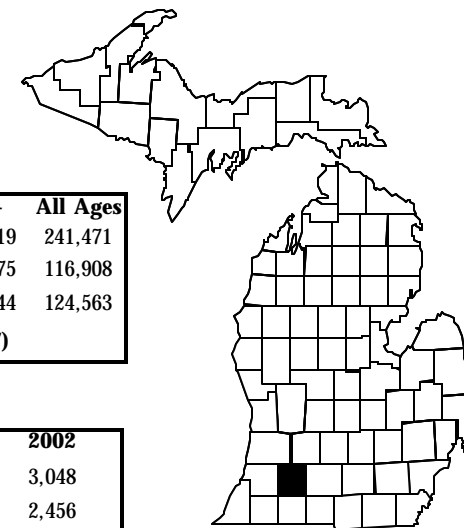
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Kalamazoo County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	3,190	15,632	15,636	16,745	19,536	24,736	17,624	16,413	15,853	17,653	17,562	15,743	11,786	8,833	27,719	241,471
Male	1,654	6,267	8,088	8,603	9,659	11,894	8,967	8,136	7,867	8,625	8,572	7,509	5,707	4,185	11,175	116,908
Female	1,536	6,175	7,548	8,142	9,877	12,842	8,657	8,277	7,986	9,028	8,990	8,234	6,079	4,648	16,544	124,563
Race(%):	White (85.8)		Black (9.9)		Native American (0.4)		Asian/Pacific Islander (2.0)		Multiple Ethnicity (2.9)		Hispanic (2.7)					

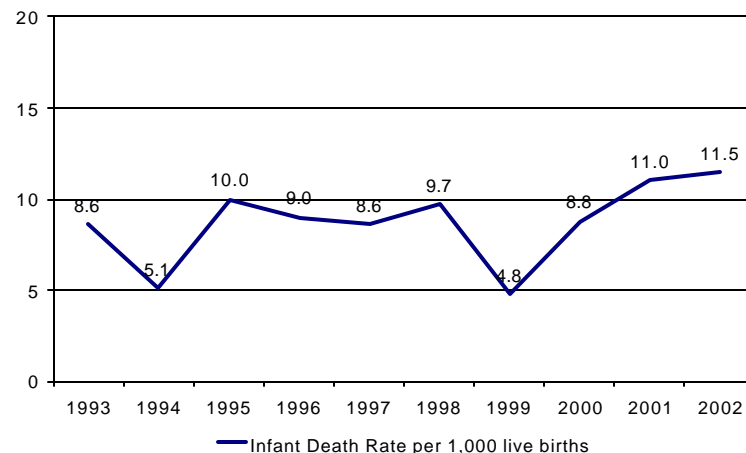
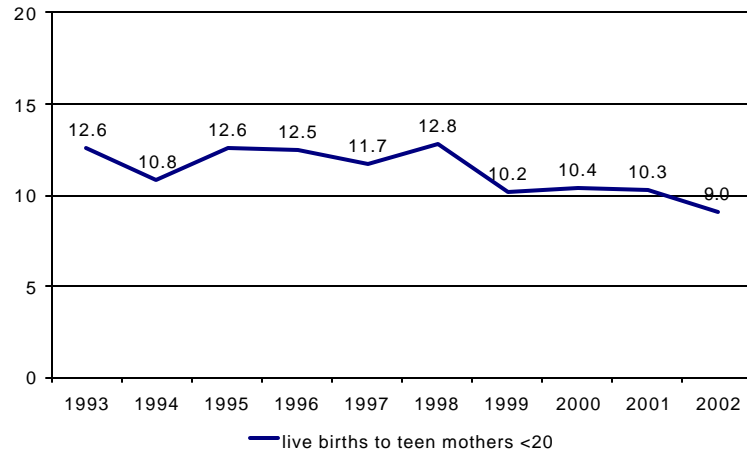
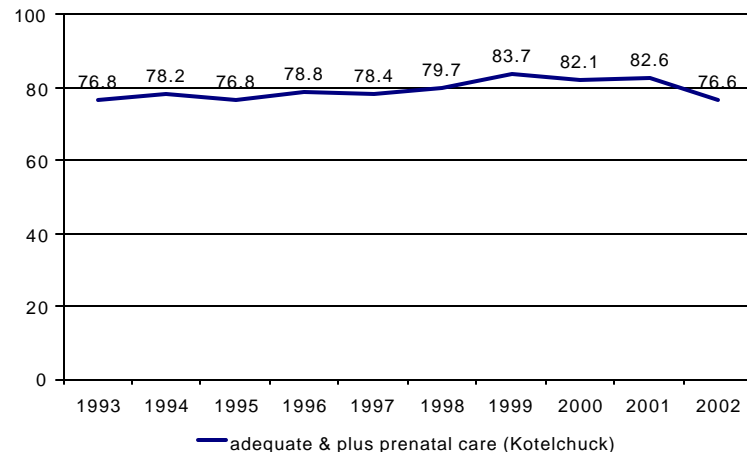
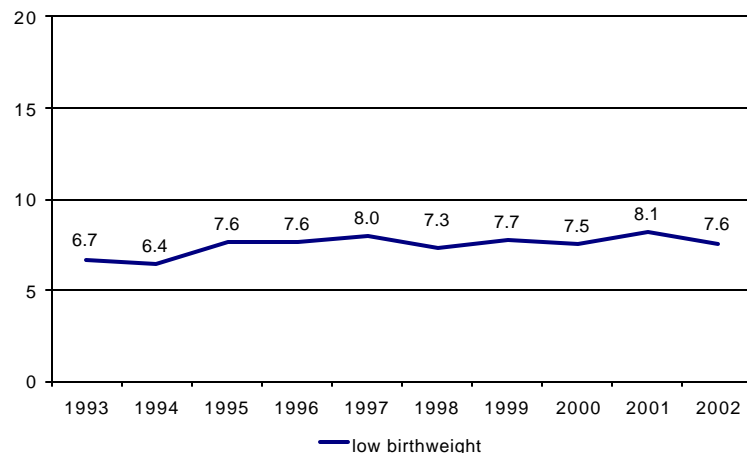
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	3,155	3,168	3,011	3,125	3,124	3,183	3,122	3,189	3,169	3,048
White	2,561	2,643	2,460	2,582	2,556	2,584	2,568	2,632	2,589	2,456
Black	535	464	471	458	478	531	502	486	520	492
American Indian	17	10	7	15	17	16	9	8	3	9
Asian & P.I.	36	49	70	66	65	48	41	59	55	87

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	44	1.4	33	1.0	46	1.5	51	1.6	56	1.8	42	1.3	47	1.5	52	1.6	64	2.0	45	1.5
1,500-2,499	168	5.3	169	5.3	183	6.1	186	6.0	195	6.2	189	5.9	192	6.1	188	5.9	194	6.1	186	6.1
Total < 2500	212	6.7	202	6.4	229	7.6	237	7.6	251	8.0	231	7.3	239	7.7	240	7.5	258	8.1	231	7.6
Preterm																				
Preterm < 37 weeks	336	10.6	291	9.2	297	9.9	300	9.6	312	10.0	332	10.4	314	10.1	359	11.3	349	11.0	331	10.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	2,422	76.8	2,476	78.2	2,313	76.8	2,461	78.8	2,449	78.4	2,536	79.7	2,614	83.7	2,618	82.1	2,617	82.6	2,334	76.6
Live Births to Teen Mothers																				
< 18	151	4.8	127	4.0	161	5.3	143	4.6	127	4.1	138	4.3	111	3.6	99	3.1	105	3.3	96	3.1
18-19	246	7.8	215	6.8	219	7.3	247	7.9	240	7.7	269	8.5	206	6.6	232	7.3	221	7.0	179	5.9
Total under 20	397	12.6	342	10.8	380	12.6	390	12.5	367	11.7	407	12.8	317	10.2	331	10.4	326	10.3	275	9.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	16	---	19	---	24	---	11	---	20	---	23	---	14	---	24	---	26	---	21	---
Infant deaths	27	8.6	16	5.1	30	10.0	28	9.0	27	8.6	31	9.7	15	4.8	28	8.8	35	11.0	35	11.5
Neonatal	14	4.4	11	3.5	20	6.6	19	6.1	20	6.4	24	7.5	9	2.9	20	6.3	23	7.3	29	9.5
Postneonatal	13	4.1	5	---	10	3.3	9	2.9	7	2.2	7	2.2	6	1.9	8	2.5	12	3.8	6	2.0
Age one to nine	9	---	3	---	8	---	5	---	8	---	10	---	7	---	5	---	8	---	10	---
Age ten to nineteen	16	---	18	---	5	---	10	---	10	---	22	---	8	---	15	---	10	---	15	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		4.8	2.1	2.7	Maternal health/prematurity
1500g+	Fetal	2.3	1.1	1.2	Maternal care
	Neonatal	1.8	1.2	0.6	Newborn care
	Postneonatal	1.8	1.0	0.8	Infant health
Total		10.7	5.4	5.3	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

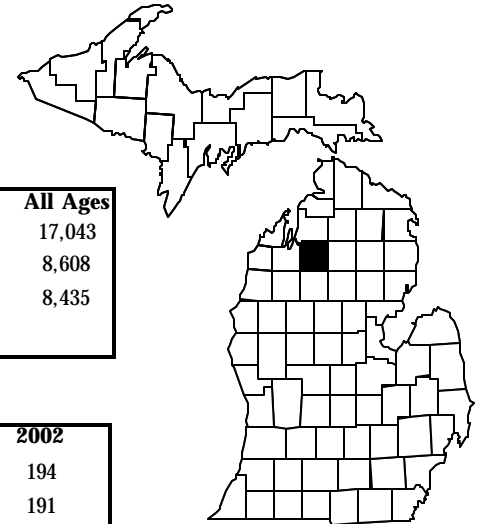
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Kalkaska County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	225	1,075	1,148	1,274	1,155	1,034	935	1,049	1,280	1,453	1,306	1,102	997	870	2,365	17,043
Male	119	434	610	654	608	502	462	520	653	751	669	571	477	448	1,130	8,608
Female	106	416	538	620	547	532	473	529	627	702	637	531	520	422	1,235	8,435
Race(%):	White (97.7)		Black (0.4)		Native American (0.8)		Asian/Pacific Islander (0.2)		Multiple Race (0.9)		Hispanic (0.9)					

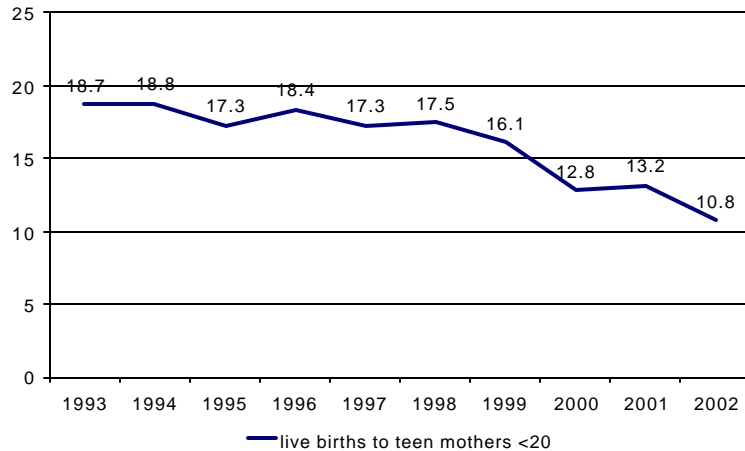
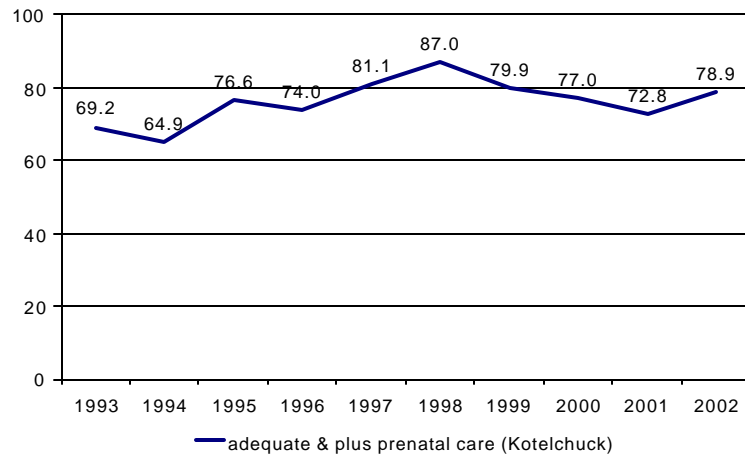
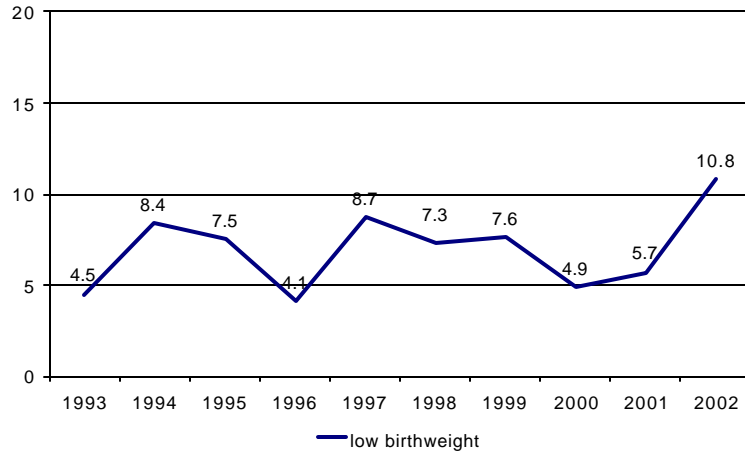
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	198	191	214	196	196	177	224	226	228	194
White	194	182	205	195	193	173	219	222	225	191
Black	---	1	1	---	---	---	---	1	---	1
American Indian	3	8	5	---	2	2	2	2	3	1
Asian & P.I.	---	---	2	1	1	2	2	1	---	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	3	---	7	3.7	0	---	1	---	2	---	1	---	1	---	2	---	1	---	5	---
1,500-2,499	6	3.0	9	4.7	16	7.5	7	3.6	15	7.7	12	6.8	16	7.1	9	4.0	12	5.3	16	8.2
Total < 2500	9	4.5	16	8.4	16	7.5	8	4.1	17	8.7	13	7.3	17	7.6	11	4.9	13	5.7	21	10.8
Preterm																				
Preterm < 37 weeks	17	8.6	16	8.4	23	10.7	13	6.6	22	11.2	18	10.2	22	9.8	20	8.8	24	10.5	22	11.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	137	69.2	124	64.9	164	76.6	145	74.0	159	81.1	154	87.0	179	79.9	174	77.0	166	72.8	153	78.9
Live Births to Teen Mothers																				
< 18	13	6.6	17	8.9	13	6.1	14	7.1	11	5.6	8	4.5	9	4.0	7	3.1	10	4.4	8	4.1
18-19	24	12.1	19	9.9	24	11.2	22	11.2	23	11.7	23	13.0	27	12.1	22	9.7	20	8.8	13	6.7
Total under 20	37	18.7	36	18.8	37	17.3	36	18.4	34	17.3	31	17.5	36	16.1	29	12.8	30	13.2	21	10.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	2	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---
Infant deaths	2	---	1	---	0	---	1	---	2	---	2	---	1	---	2	---	0	---	3	---
Neonatal	2	---	1	---	0	---	0	---	2	---	2	---	1	---	1	---	0	---	1	---
Postneonatal	0	---	0	---	0	---	1	---	0	---	0	---	0	---	1	---	0	---	2	---
Age one to nine	3	---	0	---	2	---	0	---	0	---	0	---	2	---	1	---	0	---	0	---
Age ten to nineteen	2	---	4	---	0	---	4	---	2	---	1	---	0	---	0	---	1	---	1	---

*If number is less than 6, the rate is not calculated.

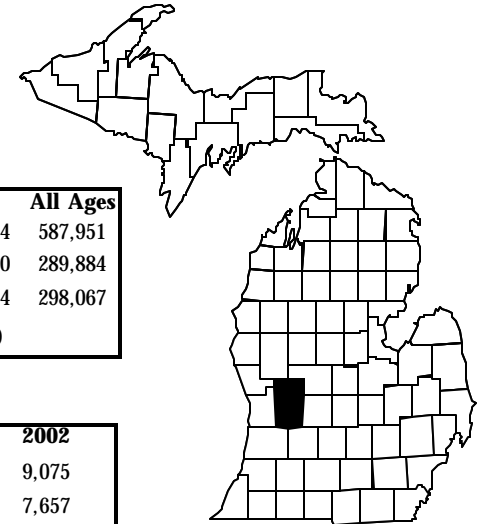
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Kent County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	9,347	45,819	44,538	46,689	44,270	43,169	41,984	44,358	45,329	47,072	43,450	35,829	25,827	19,243	60,374	587,951
Male	4,835	18,704	22,803	24,037	22,525	21,757	21,212	22,645	22,683	23,457	21,481	17,662	12,591	9,092	24,400	289,884
Female	4,512	17,768	21,735	22,652	21,745	21,412	20,772	21,713	22,646	23,615	21,969	18,167	13,236	10,151	35,974	298,067
Race(%):	White (86.2)		Black (9.4)		Native American (0.5)		Asian/Pacific Islander (2.2)		Multiple Ethnicity (7.7)		City(%):		Hispanic (7.8)			

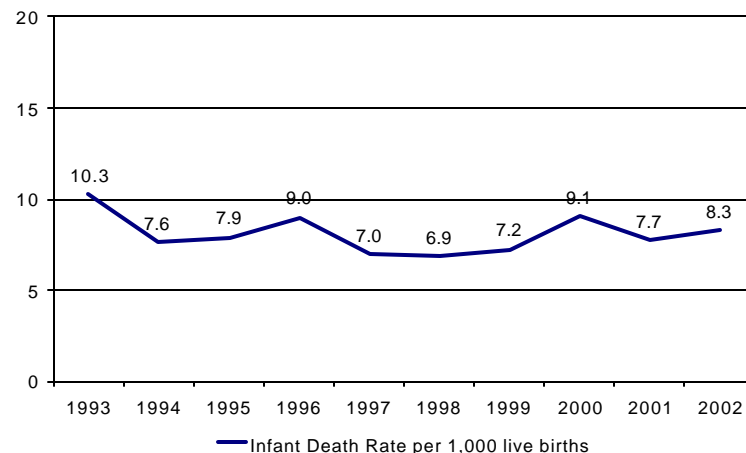
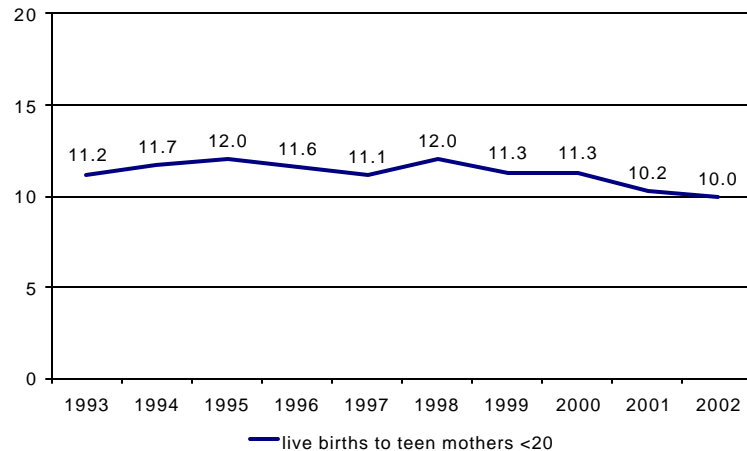
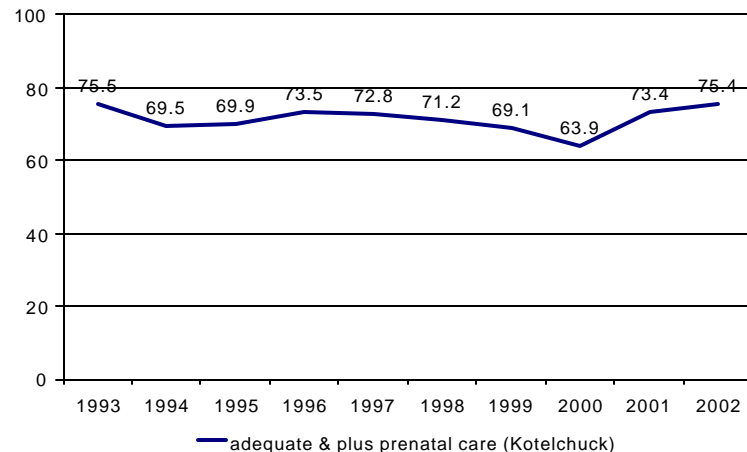
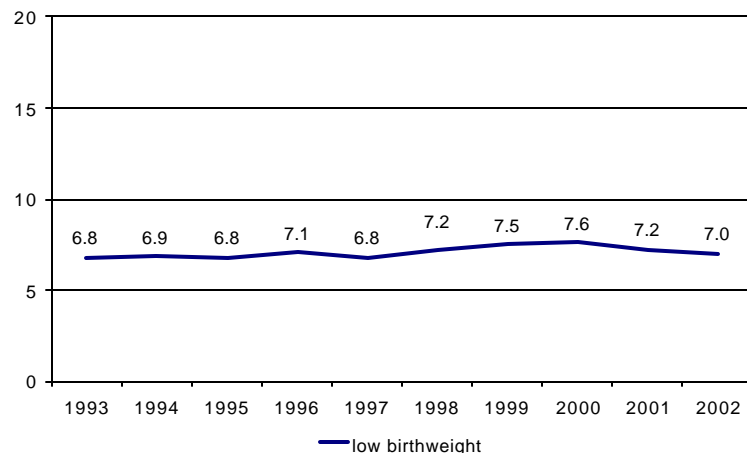
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	8,811	8,778	8,884	8,972	8,998	9,155	9,386	9,596	9,306	9,075
White	7,573	7,511	7,589	7,660	7,668	7,753	7,845	7,998	7,797	7,657
Black	1,075	1,074	1,061	1,037	1,073	1,082	1,130	1,237	1,109	1,033
American Indian	41	34	34	45	49	28	28	20	18	24
Asian & P.I.	95	136	171	188	190	264	375	291	287	260

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	121	1.4	132	1.5	124	1.4	146	1.6	124	1.4	113	1.2	141	1.5	151	1.6	138	1.5	141	1.6
1,500-2,499	482	5.5	470	5.4	481	5.4	487	5.4	484	5.4	548	6.0	563	6.0	583	6.1	535	5.7	497	5.5
Total < 2500	603	6.8	602	6.9	605	6.8	633	7.1	608	6.8	661	7.2	704	7.5	734	7.6	673	7.2	638	7.0
Preterm																				
Preterm < 37 weeks	870	9.9	844	9.6	898	10.1	879	9.8	902	10.0	932	10.2	922	9.8	988	10.3	1,014	10.9	1,027	11.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	6,654	75.5	6,104	69.5	6,207	69.9	6,593	73.5	6,549	72.8	6,520	71.2	6,484	69.1	6,134	63.9	6,828	73.4	6,846	75.4
Live Births to Teen Mothers																				
< 18	399	4.5	425	4.8	442	5.0	410	4.6	396	4.4	395	4.3	393	4.2	386	4.0	338	3.6	325	3.6
18-19	588	6.7	606	6.9	622	7.0	634	7.1	599	6.7	702	7.7	667	7.1	698	7.3	615	6.6	578	6.4
Total under 20	987	11.2	1,031	11.7	1,064	12.0	1,044	11.6	995	11.1	1,097	12.0	1,060	11.3	1,084	11.3	953	10.2	903	10.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	43	---	72	---	66	---	51	---	55	---	63	---	58	---	32	---	47	---	47	---
Infant deaths	91	10.3	67	7.6	70	7.9	81	9.0	63	7.0	63	6.9	68	7.2	87	9.1	72	7.7	75	8.3
Neonatal	53	6.0	45	5.1	44	5.0	51	5.7	44	4.9	36	3.9	51	5.4	59	6.1	51	5.5	55	6.1
Postneonatal	38	4.3	22	2.5	26	2.9	30	3.3	19	2.1	27	2.9	17	1.8	28	2.9	21	2.3	20	2.2
Age one to nine	23	---	24	---	22	---	26	---	10	---	24	---	22	---	16	---	19	---	10	---
Age ten to nineteen	30	---	56	---	32	---	31	---	36	---	26	---	36	---	28	---	35	---	44	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.7	2.1	1.6	Maternal health/prematurity
1500g+	Fetal	1.4	1.1	0.3	Maternal care
	Neonatal	1.7	1.2	0.5	Newborn care
	Postneonatal	1.7	1.0	0.7	Infant health
Total		8.5	5.4	3.1	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

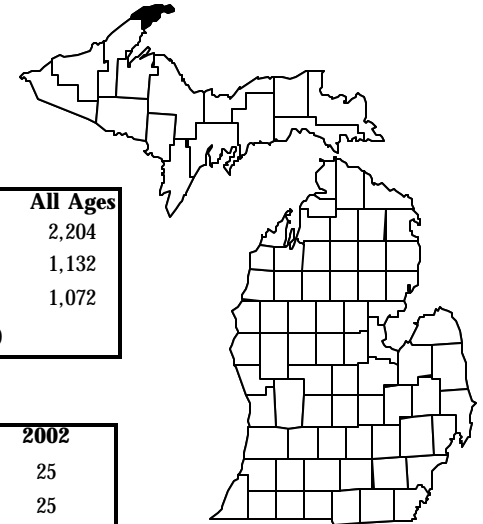
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Keweenaw County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	21	108	110	135	153	104	85	96	122	149	175	191	158	171	447	2,204
Male	13	48	52	84	90	51	44	51	62	72	79	98	84	92	212	1,132
Female	8	39	58	51	63	53	41	45	60	77	96	93	74	79	235	1,072
Race(%):	White (98.7)		Black (0.9)		Native American (0.0)		Asian/Pacific Islander (0.1)		Multiple Race (0.2)		Hispanic (1.2)					

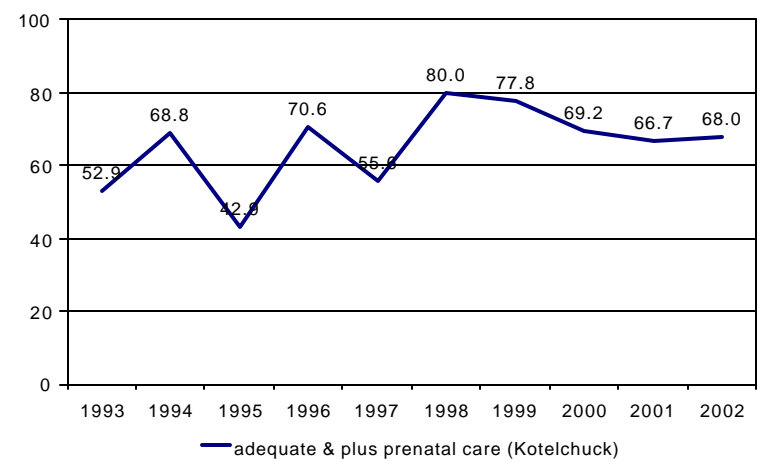
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	17	16	14	17	18	30	18	26	21	25
White	17	16	14	17	18	30	17	26	21	25
Black	---	---	---	---	---	---	---	---	---	---
American Indian	---	---	---	---	---	---	1	---	---	---
Asian & P.I.	---	---	---	---	---	---	---	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---
1,500-2,499	0	---	0	---	1	---	1	---	1	---	2	---	0	---	3	---	2	---	1	---
Total < 2500	1	---	0	---	1	---	1	---	1	---	2	---	0	---	3	---	2	---	2	---
Preterm																				
Preterm < 37 weeks	3	---	3	---	1	---	2	---	1	---	3	---	1	---	6	23.1	3	---	4	---
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	9	52.9	11	68.8	6	42.9	12	70.6	10	55.6	24	80.0	14	77.8	18	69.2	14	66.7	17	68.0
Live Births to Teen Mothers																				
< 18	0	---	0	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---
18-19	1	---	0	---	0	---	0	---	4	---	0	---	0	---	1	---	2	---	0	---
Total under 20	1	---	0	---	1	---	0	---	4	---	1	---	0	---	1	---	2	---	0	---
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---	0	---
Infant deaths	2	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---
Neonatal	2	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---
Postneonatal	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age one to nine	0	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---

*If number is less than 6, the rate is not calculated.

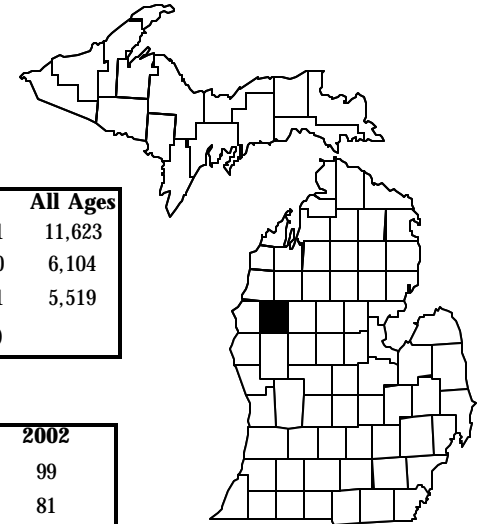
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Lake County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	174	686	605	703	1,044	643	542	591	677	826	775	773	765	762	2,231	11,623
Male	80	250	305	373	711	346	279	328	355	423	387	399	390	368	1,110	6,104
Female	94	262	300	330	333	297	263	263	322	403	388	374	375	394	1,121	5,519
Race(%):	White (85.3)		Black (12.0)		Native American (1.1)		Asian/Pacific Islander (0.2)		Multiple Ethnicity(%)		Hispanic (1.8)					

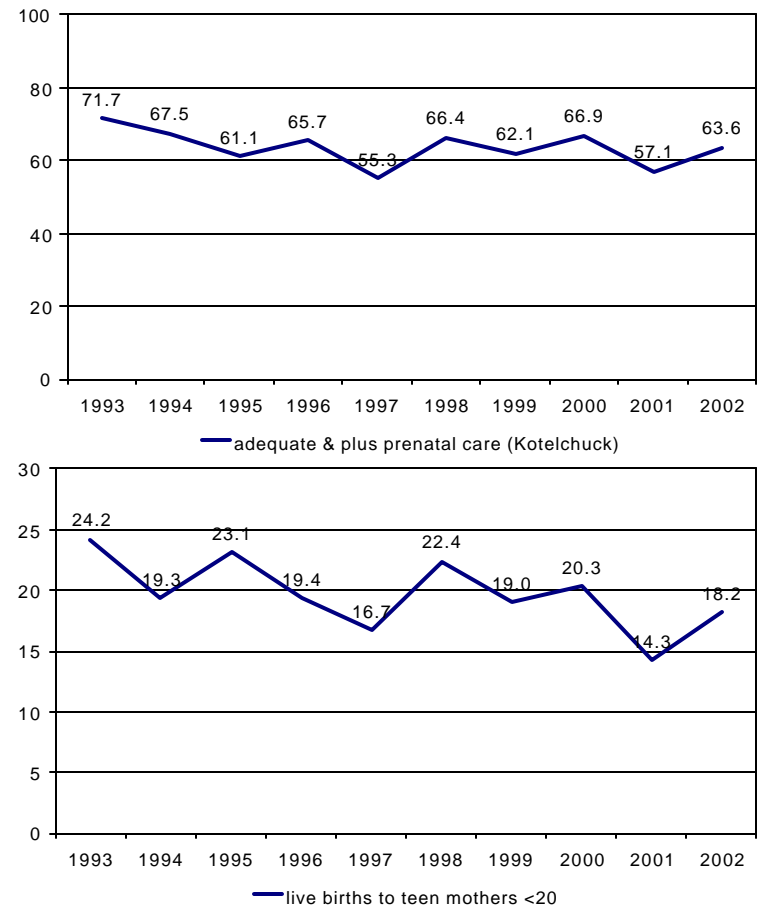
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	120	114	108	108	114	134	116	133	91	99
White	99	91	99	92	92	114	100	110	81	81
Black	20	20	9	13	20	18	15	22	7	13
American Indian	1	2	---	2	1	1	1	1	2	2
Asian & P.I.	---	1	---	---	1	1	---	---	1	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	1	---	4	---	1	---	0	---	0	---	1	---	4	---	1	---	2	---
1,500-2,499	6	5.0	6	5.3	10	9.3	5	---	14	12.3	11	8.2	3	---	4	---	1	---	3	---
Total < 2500	6	5.0	7	6.1	14	13.0	6	5.6	14	12.3	11	8.2	4	---	8	6.0	2	---	5	---
Preterm																				
Preterm < 37 weeks	6	5.0	12	10.5	13	12.0	8	7.4	19	16.7	16	11.9	8	6.9	15	11.3	8	8.8	9	9.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	86	71.7	77	67.5	66	61.1	71	65.7	63	55.3	89	66.4	72	62.1	89	66.9	52	57.1	63	63.6
Live Births to Teen Mothers																				
< 18	11	9.2	7	6.1	9	8.3	10	9.3	11	9.6	9	6.7	8	6.9	12	9.0	3	---	7	7.1
18-19	18	15.0	15	13.2	16	14.8	11	10.2	8	7.0	21	15.7	14	12.1	15	11.3	10	11.0	11	11.1
Total under 20	29	24.2	22	19.3	25	23.1	21	19.4	19	16.7	30	22.4	22	19.0	27	20.3	13	14.3	18	18.2
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	1	---	2	---	1	---	1	---	0	---	0	---	0	---	0	---
Infant deaths	1	---	1	---	0	---	3	---	0	---	0	---	1	---	1	---	0	---	0	---
Neonatal	0	---	1	---	0	---	2	---	0	---	0	---	1	---	1	---	0	---	0	---
Postneonatal	1	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---
Age one to nine	0	---	2	---	1	---	0	---	2	---	2	---	0	---	0	---	0	---	0	---
Age ten to nineteen	2	---	3	---	2	---	0	---	2	---	0	---	0	---	2	---	0	---	1	---

*If number is less than 6, the rate is not calculated.

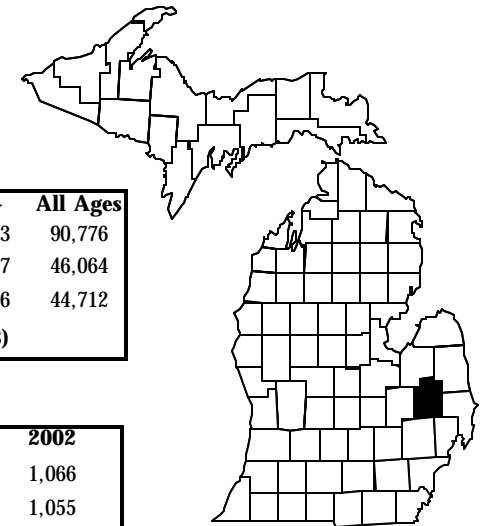
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Lapeer County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,071	5,537	6,571	7,395	6,897	5,776	4,679	6,144	7,576	8,191	7,705	6,463	5,096	3,783	8,963	90,776
Male	561	2,323	3,336	3,785	3,617	3,050	2,424	3,193	3,819	4,175	4,004	3,313	2,616	1,931	3,917	46,064
Female	510	2,143	3,235	3,610	3,280	2,726	2,255	2,951	3,757	4,016	3,701	3,150	2,480	1,852	5,046	44,712
Race(%):	White (97.4)		Black (0.9)		Native American (0.4)		Asian/Pacific Islander (0.4)		Multiple Race (0.3)		Hispanic (3.3)					

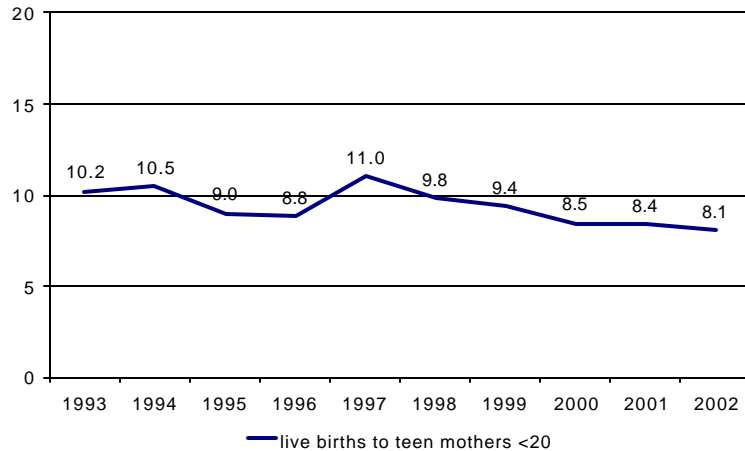
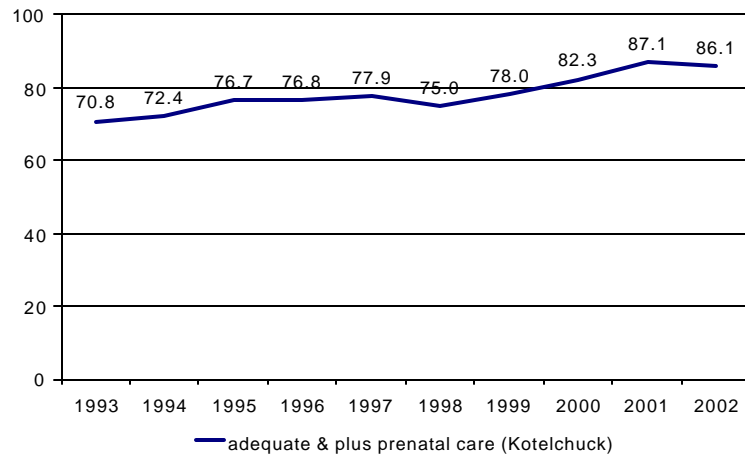
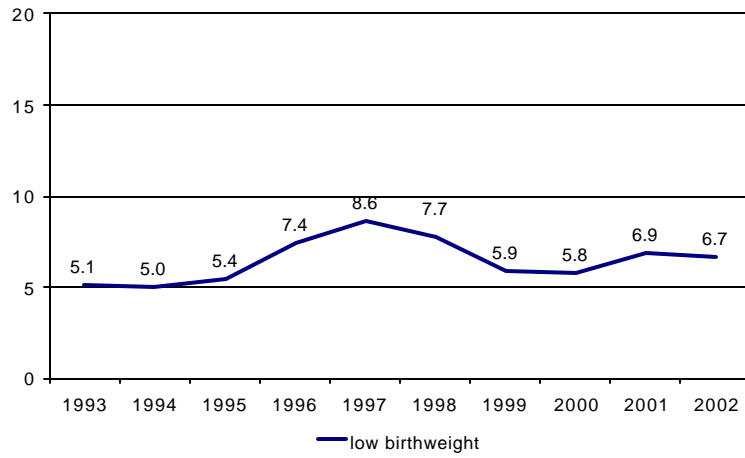
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,137	1,093	1,120	1,097	1,097	1,091	1,125	1,076	1,064	1,066
White	1,129	1,084	1,109	1,089	1,091	1,076	1,111	1,065	1,048	1,055
Black	---	3	2	2	2	3	4	3	5	2
American Indian	2	---	4	1	1	4	---	2	1	---
Asian & P.I.	3	3	3	3	2	6	7	4	8	8

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	11	1.0	7	0.6	6	0.5	19	1.7	25	2.3	18	1.6	5	---	9	0.8	13	1.2	8	0.8
1,500-2,499	47	4.1	48	4.4	54	4.8	62	5.7	69	6.3	66	6.0	61	5.4	53	4.9	60	5.6	63	5.9
Total < 2500	58	5.1	55	5.0	60	5.4	81	7.4	94	8.6	84	7.7	66	5.9	62	5.8	73	6.9	71	6.7
Preterm																				
Preterm < 37 weeks	101	8.9	85	7.8	95	8.5	99	9.0	127	11.6	114	10.4	112	10.0	104	9.7	103	9.7	108	10.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	805	70.8	791	72.4	859	76.7	843	76.8	855	77.9	818	75.0	878	78.0	886	82.3	927	87.1	918	86.1
Live Births to Teen Mothers																				
< 18	36	3.2	33	3.0	37	3.3	36	3.3	43	3.9	36	3.3	34	3.0	24	2.2	21	2.0	27	2.5
18-19	80	7.0	82	7.5	64	5.7	60	5.5	78	7.1	71	6.5	72	6.4	67	6.2	68	6.4	59	5.5
Total under 20	116	10.2	115	10.5	101	9.0	96	8.8	121	11.0	107	9.8	106	9.4	91	8.5	89	8.4	86	8.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	7	---	6	---	4	---	5	---	3	---	2	---	8	---	6	---	6	---	6	---
Infant deaths	5	---	4	---	3	---	9	8.2	10	9.1	11	10.1	8	7.1	5	---	6	5.6	6	5.6
Neonatal	4	---	1	---	2	---	6	5.5	9	8.2	7	6.4	4	---	3	---	4	---	5	---
Postneonatal	1	---	3	---	1	---	3	---	1	---	4	---	4	---	2	---	2	---	1	---
Age one to nine	6	---	2	---	3	---	0	---	6	---	1	---	3	---	4	---	4	---	7	---
Age ten to nineteen	7	---	5	---	3	---	4	---	9	---	8	---	8	---	6	---	3	---	9	---

*If number is less than 6, the rate is not calculated.

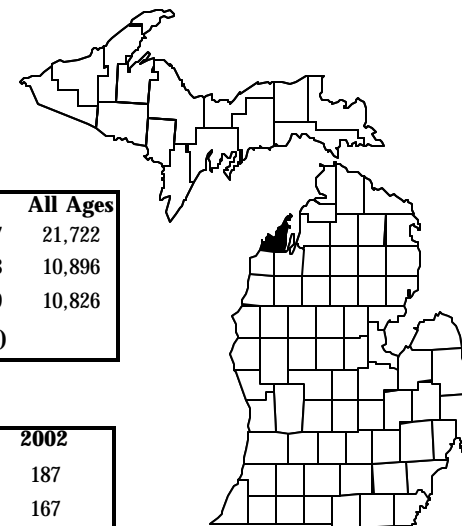
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Leelanau County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	234	1,064	1,271	1,601	1,621	1,034	856	1,001	1,266	1,733	2,039	1,786	1,322	1,211	3,917	21,722
Male	135	441	688	811	840	567	446	509	605	822	1,004	914	668	578	1,868	10,896
Female	99	389	583	790	781	467	410	492	661	911	1,035	872	654	633	2,049	10,826
Race(%):	White (95.0)		Black (0.3)		Native American (3.8)		Asian/Pacific Islander (0.3)		Multiple Race (0.3)		Ethnicity(%):		Hispanic (3.2)			

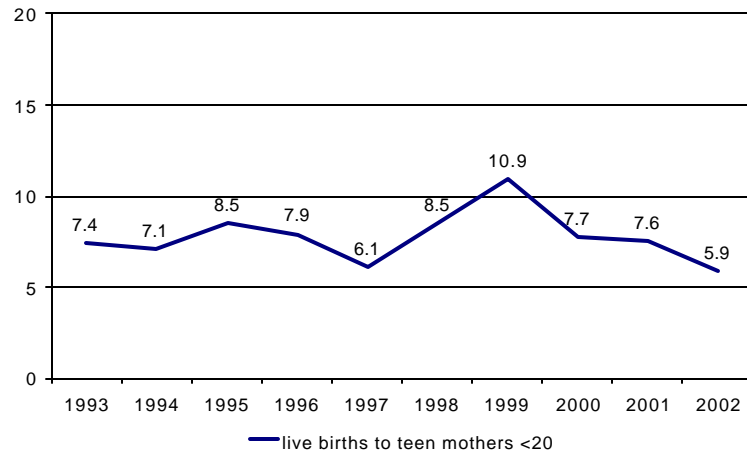
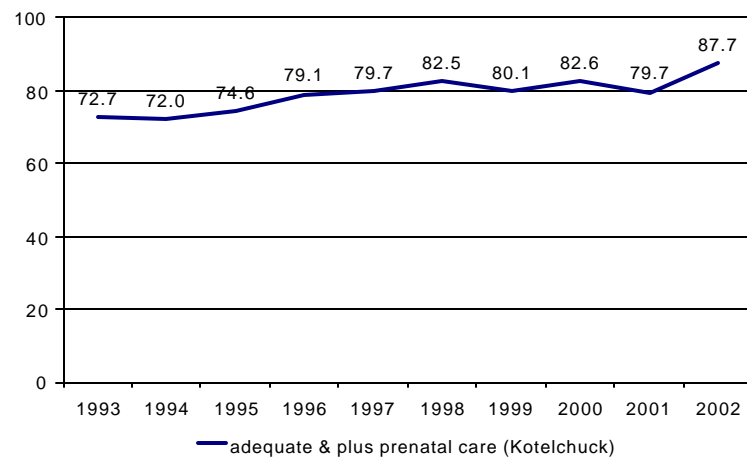
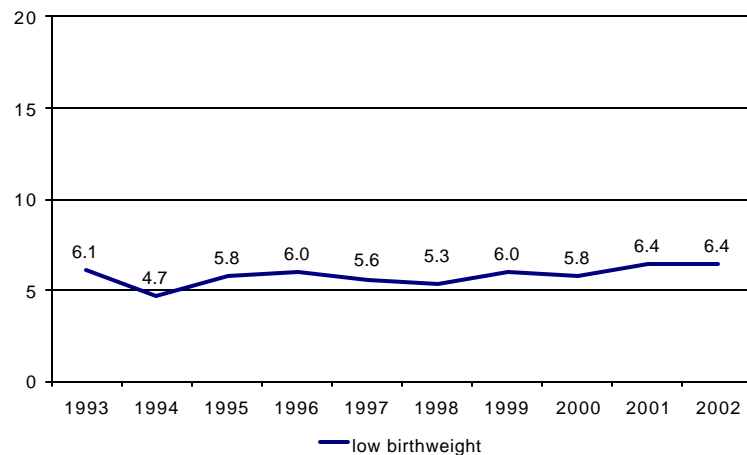
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	231	211	189	215	197	189	201	207	172	187
White	214	199	174	193	179	172	180	193	156	167
Black	1	---	1	---	---	1	---	1	---	---
American Indian	15	10	13	21	17	14	21	13	16	19
Asian & P.I.	1	---	---	1	1	2	---	---	---	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	2.6	3	---	2	---	1	---	2	---	3	---	3	---	3	---	1	---	0	---
1,500-2,499	8	3.5	7	3.3	9	4.8	12	5.6	9	4.6	7	3.7	9	4.5	9	4.3	10	5.8	12	6.4
Total < 2500	14	6.1	10	4.7	11	5.8	13	6.0	11	5.6	10	5.3	12	6.0	12	5.8	11	6.4	12	6.4
Preterm																				
Preterm < 37 weeks	25	10.8	20	9.5	14	7.4	15	7.0	17	8.6	19	10.1	12	6.0	19	9.2	17	9.9	22	11.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	168	72.7	152	72.0	141	74.6	170	79.1	157	79.7	156	82.5	161	80.1	171	82.6	137	79.7	164	87.7
Live Births to Teen Mothers																				
< 18	4	---	4	---	2	---	6	2.8	7	3.6	6	3.2	6	3.0	5	---	4	---	6	3.2
18-19	13	5.6	11	5.2	14	7.4	11	5.1	5	---	10	5.3	16	8.0	11	5.3	9	5.2	5	---
Total under 20	17	7.4	15	7.1	16	8.5	17	7.9	12	6.1	16	8.5	22	10.9	16	7.7	13	7.6	11	5.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	0	---	4	---	1	---	2	---	1	---	0	---	0	---	0	---
Infant deaths	4	---	1	---	1	---	1	---	1	---	0	---	1	---	0	---	0	---	2	---
Neonatal	2	---	1	---	0	---	1	---	1	---	0	---	0	---	0	---	0	---	1	---
Postneonatal	2	---	0	---	1	---	0	---	0	---	0	---	1	---	0	---	0	---	1	---
Age one to nine	1	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---
Age ten to nineteen	1	---	2	---	0	---	2	---	0	---	1	---	0	---	3	---	0	---	1	---

*If number is less than 6, the rate is not calculated.

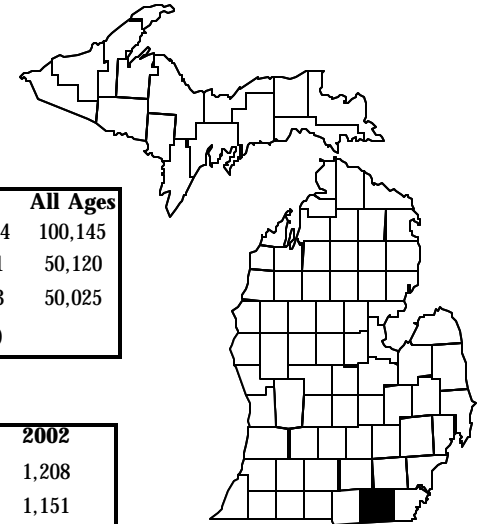
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Lenawee County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,138	5,951	6,612	7,689	7,731	7,017	5,608	6,795	7,264	7,934	7,861	7,170	5,663	4,196	12,654	100,145
Male	555	2,441	3,416	3,929	3,973	3,735	2,945	3,581	3,748	3,998	4,044	3,615	2,822	2,047	5,271	50,120
Female	583	2,372	3,196	3,760	3,758	3,282	2,663	3,214	3,516	3,936	3,817	3,555	2,841	2,149	7,383	50,025
Race(%):	White (95.9)		Black (2.2)		Native American (0.4)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (0.9)		Hispanic (7.1)					

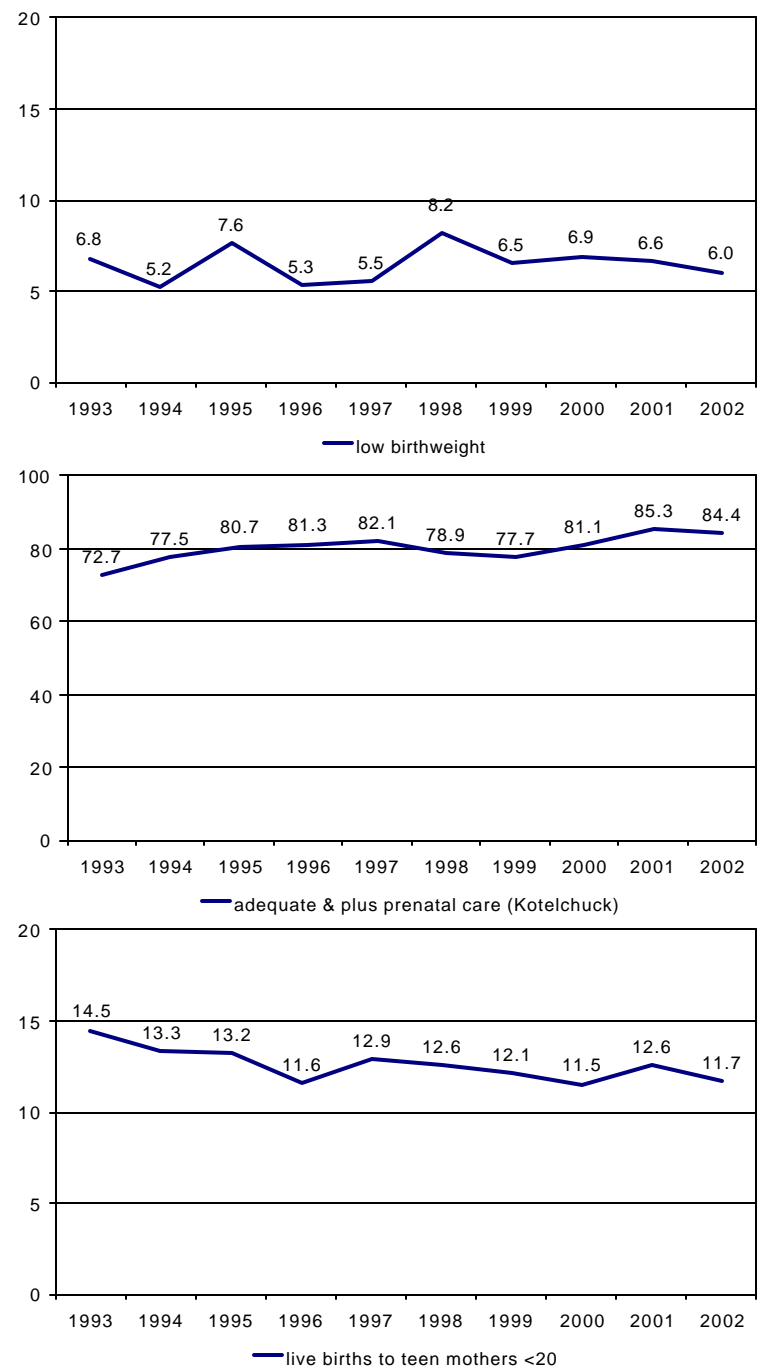
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,185	1,168	1,199	1,143	1,184	1,197	1,177	1,216	1,224	1,208
White	1,163	1,143	1,161	1,092	1,159	1,165	1,142	1,168	1,175	1,151
Black	10	11	19	26	10	18	19	28	27	26
American Indian	2	3	2	5	3	2	---	3	9	6
Asian & P.I.	6	3	8	5	4	7	10	10	12	13

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	18	1.5	10	0.9	12	1.0	10	0.9	19	1.6	9	0.8	10	0.8	10	0.8	13	1.1	13	1.1
1,500-2,499	63	5.3	51	4.4	79	6.6	51	4.5	46	3.9	89	7.4	66	5.6	74	6.1	68	5.6	60	5.0
Total < 2500	81	6.8	61	5.2	91	7.6	61	5.3	65	5.5	98	8.2	76	6.5	84	6.9	81	6.6	73	6.0
Preterm																				
Preterm < 37 weeks	107	9.0	95	8.1	133	11.1	114	10.0	136	11.5	119	9.9	119	10.1	122	10.0	138	11.3	139	11.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	861	72.7	905	77.5	968	80.7	929	81.3	972	82.1	945	78.9	915	77.7	986	81.1	1,044	85.3	1,020	84.4
Live Births to Teen Mothers																				
< 18	57	4.8	49	4.2	64	5.3	48	4.2	55	4.6	46	3.8	53	4.5	43	3.5	47	3.8	43	3.6
18-19	115	9.7	106	9.1	94	7.8	85	7.4	98	8.3	105	8.8	90	7.6	97	8.0	107	8.7	98	8.1
Total under 20	172	14.5	155	13.3	158	13.2	133	11.6	153	12.9	151	12.6	143	12.1	140	11.5	154	12.6	141	11.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	6	---	11	---	4	---	5	---	4	---	7	---	9	---	5	---	2	---	2	---
Infant deaths	14	11.8	5	---	11	9.2	4	---	4	---	7	5.8	9	7.6	5	---	8	6.5	3	---
Neonatal	10	8.4	3	---	9	7.5	2	---	4	---	5	---	7	5.9	2	---	6	4.9	2	---
Postneonatal	4	---	2	---	2	---	2	---	0	---	2	---	2	---	3	---	2	---	1	---
Age one to nine	6	---	4	---	2	---	4	---	2	---	5	---	2	---	4	---	0	---	0	---
Age ten to nineteen	10	---	9	---	6	---	6	---	14	---	9	---	12	---	7	---	11	---	3	---

*If number is less than 6, the rate is not calculated.

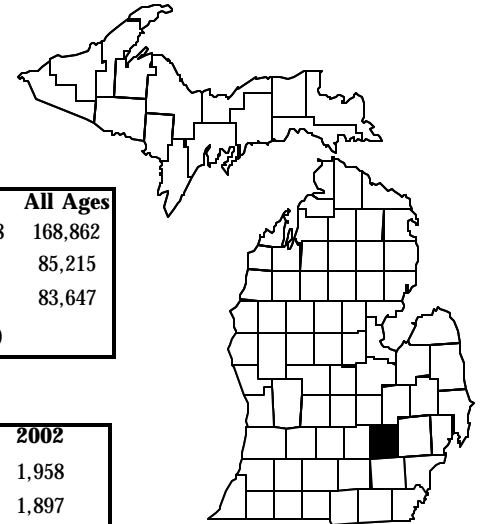
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Livingston County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	2,083	10,871	12,657	13,776	12,740	10,065	8,616	11,607	14,576	15,983	14,742	12,551	9,688	6,782	14,208	168,862
Male	1,069	4,603	6,506	7,163	6,655	5,214	4,423	5,764	7,148	8,105	7,508	6,355	4,928	3,485	6,289	85,215
Female	1,014	4,185	6,151	6,613	6,085	4,851	4,193	5,843	7,428	7,878	7,234	6,196	4,760	3,297	7,919	83,647
Race(%):	White (97.3)		Black (0.6)		Native American (0.4)		Asian/Pacific Islander (0.8)		Multiple Race (0.9)		Hispanic (1.4)					

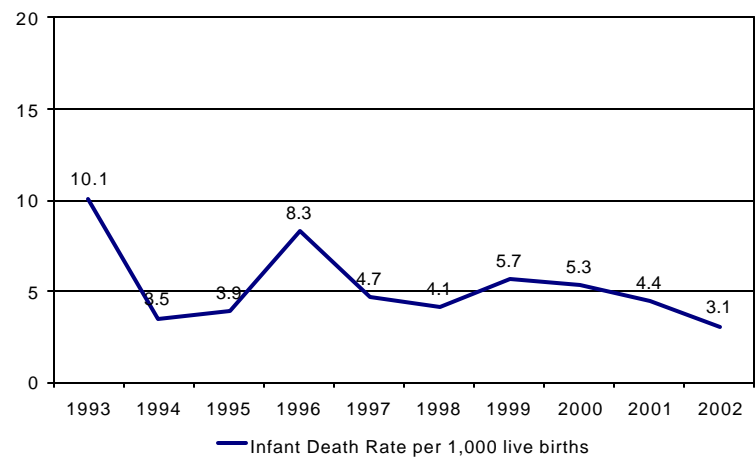
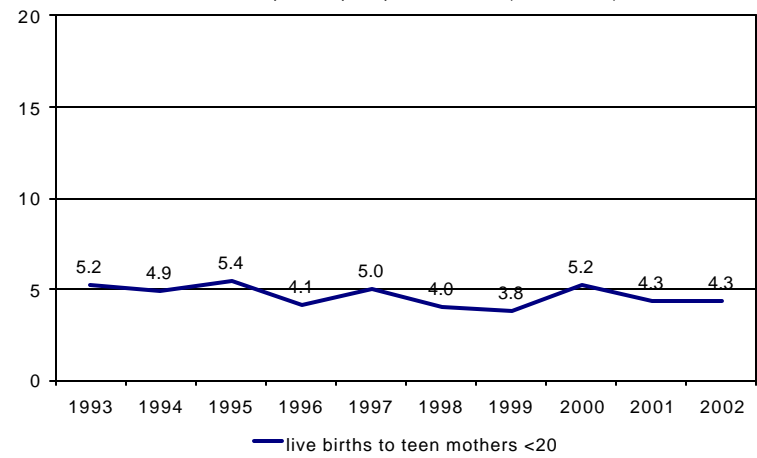
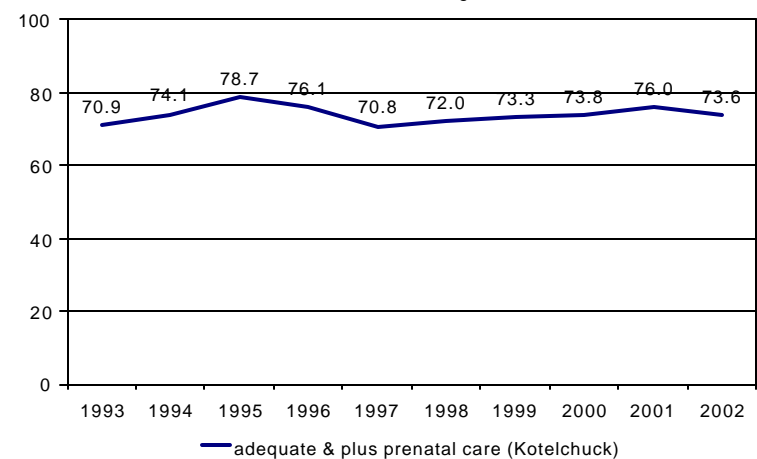
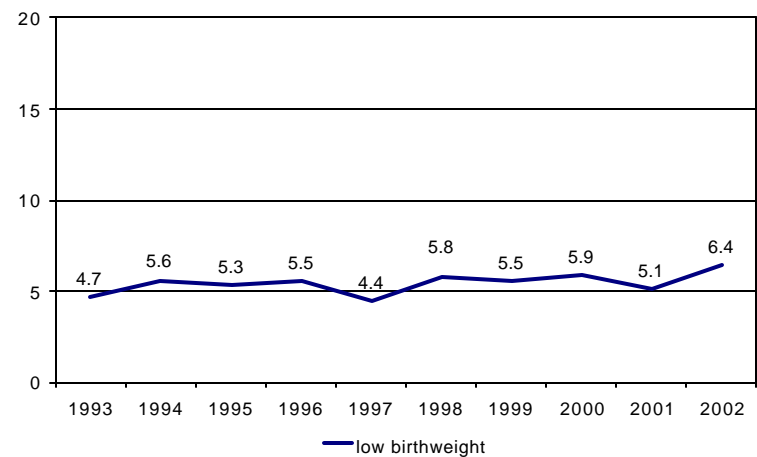
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,688	1,728	1,806	1,811	1,901	1,954	1,935	2,061	2,045	1,958
White	1,654	1,668	1,745	1,740	1,833	1,897	1,858	1,972	1,992	1,897
Black	1	4	2	4	4	2	4	1	1	4
American Indian	8	3	10	7	9	12	7	6	8	8
Asian & P.I.	12	21	15	20	22	20	23	32	32	30

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	23	1.4	16	0.9	16	0.9	22	1.2	17	0.9	20	1.0	24	1.2	26	1.3	26	1.3	14	0.7
1,500-2,499	56	3.3	81	4.7	80	4.4	78	4.3	67	3.5	93	4.8	82	4.2	95	4.6	79	3.9	111	5.7
Total < 2500	79	4.7	97	5.6	96	5.3	100	5.5	84	4.4	113	5.8	106	5.5	121	5.9	105	5.1	125	6.4
Preterm																				
Preterm < 37 weeks	130	7.7	177	10.2	156	8.6	101	5.6	127	6.7	192	9.8	147	7.6	180	8.7	175	8.6	201	10.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,196	70.9	1,280	74.1	1,422	78.7	1,378	76.1	1,345	70.8	1,406	72.0	1,418	73.3	1,521	73.8	1,554	76.0	1,442	73.6
Live Births to Teen Mothers																				
< 18	27	1.6	23	1.3	31	1.7	26	1.4	23	1.2	22	1.1	20	1.0	30	1.5	23	1.1	26	1.3
18-19	60	3.6	61	3.5	66	3.7	49	2.7	72	3.8	57	2.9	54	2.8	77	3.7	65	3.2	59	3.0
Total under 20	87	5.2	84	4.9	97	5.4	75	4.1	95	5.0	79	4.0	74	3.8	107	5.2	88	4.3	85	4.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	11	---	8	---	3	---	10	---	4	---	4	---	5	---	5	---	8	---	9	---
Infant deaths	17	10.1	6	3.5	7	3.9	15	8.3	9	4.7	8	4.1	11	5.7	11	5.3	9	4.4	6	3.1
Neonatal	14	8.3	3	---	4	---	11	6.1	7	3.7	8	4.1	8	4.1	7	3.4	4	---	5	---
Postneonatal	3	---	3	---	3	---	4	---	2	---	0	---	3	---	4	---	5	---	1	---
Age one to nine	3	---	2	---	4	---	2	---	1	---	8	---	4	---	2	---	0	---	4	---
Age ten to nineteen	8	---	5	---	5	---	8	---	6	---	10	---	16	---	6	---	7	---	9	---

*If number is less than 6, the rate is not calculated.

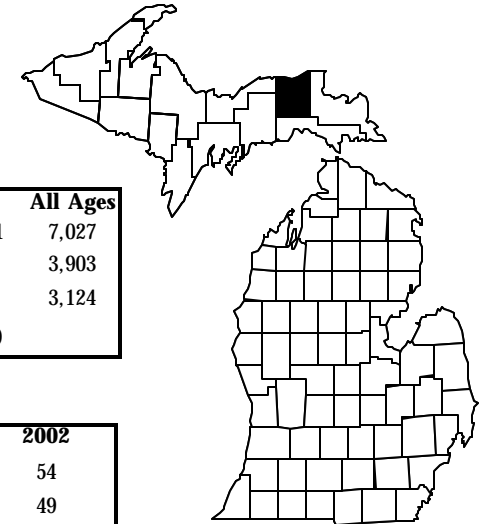
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Luce County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	73	339	400	420	488	483	486	543	517	561	534	481	381	323	1,071	7,027
Male	40	139	198	192	273	336	335	364	343	325	298	239	200	140	481	3,903
Female	33	127	202	228	215	147	151	179	174	236	236	242	181	183	590	3,124
Race(%):	White (84.0)		Black (7.8)		Native American (5.7)		Asian/Pacific Islander (0.6)		Multiple Race (1.2)		Hispanic (1.8)					

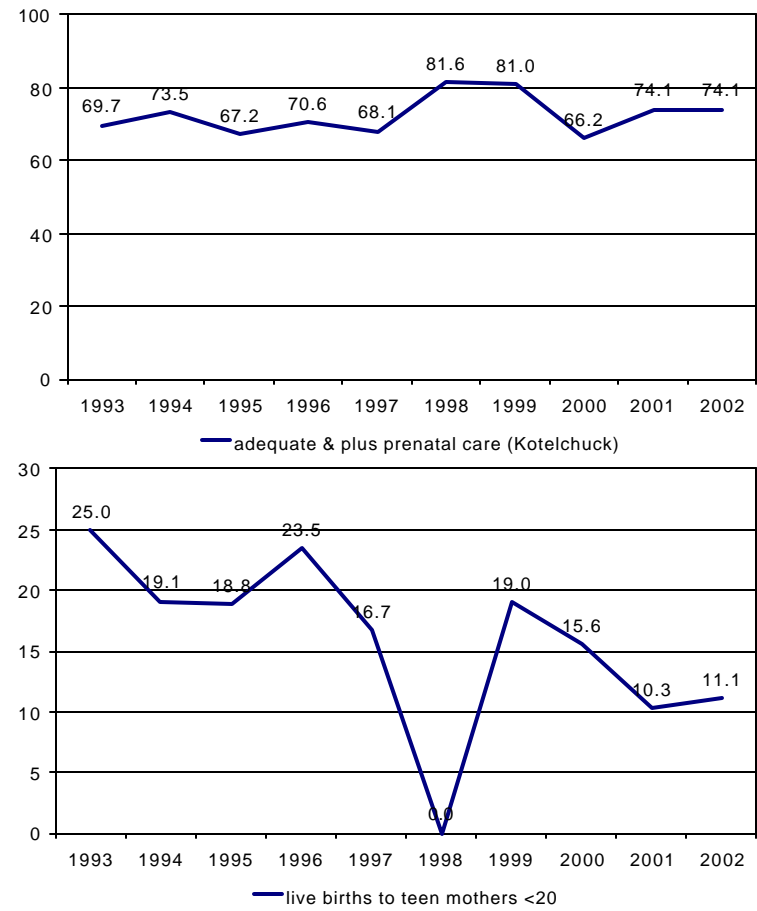
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	76	68	64	68	72	49	58	77	58	54
White	74	65	57	62	64	46	52	73	54	49
Black	---	---	---	---	---	---	---	---	---	---
American Indian	1	3	6	5	7	3	6	3	3	5
Asian & P.I.	1	---	1	1	1	---	---	1	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	1	---	2	---	0	---	2	---	0	---	0	---	1	---	0	---	0	---
1,500-2,499	5	---	6	8.8	4	---	4	---	2	---	4	---	4	---	4	---	2	---	3	---
Total < 2500	6	7.9	7	10.3	6	9.4	4	---	4	---	4	---	4	---	5	---	2	---	3	---
Preterm																				
Preterm < 37 weeks	5	---	8	11.8	8	12.5	8	11.8	8	11.1	2	---	3	---	7	9.1	9	15.5	5	---
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	53	69.7	50	73.5	43	67.2	48	70.6	49	68.1	40	81.6	47	81.0	51	66.2	43	74.1	40	74.1
Live Births to Teen Mothers																				
< 18	4	---	5	---	2	---	8	11.8	5	---	1	---	2	---	5	---	3	---	4	---
18-19	15	19.7	8	11.8	10	15.6	8	11.8	7	9.7	1	---	9	15.5	7	9.1	3	---	2	---
Total under 20	19	25.0	13	19.1	12	18.8	16	23.5	12	16.7	2	---	11	19.0	12	15.6	6	10.3	6	11.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	2	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Infant deaths	0	---	0	---	0	---	0	---	2	---	0	---	0	---	2	---	0	---	0	---
Neonatal	0	---	0	---	0	---	0	---	1	---	0	---	0	---	1	---	0	---	0	---
Postneonatal	0	---	0	---	0	---	0	---	1	---	0	---	0	---	1	---	0	---	0	---
Age one to nine	0	---	0	---	0	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---
Age ten to nineteen	0	---	0	---	0	---	1	---	1	---	0	---	1	---	0	---	0	---	2	---

*If number is less than 6, the rate is not calculated.

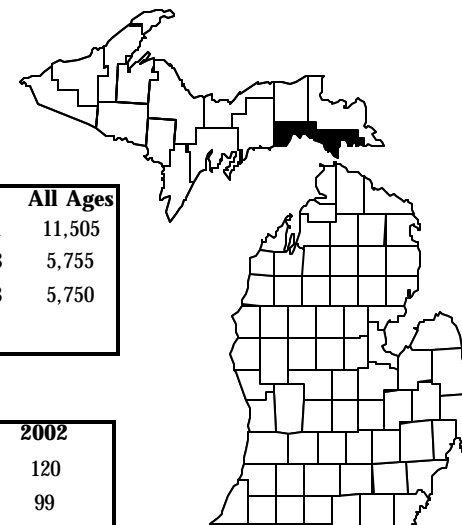
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Mackinac County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	73	468	648	814	744	552	531	614	744	886	915	906	747	715	2,221	11,505
Male	42	223	333	422	385	284	279	317	362	436	458	453	372	361	1,028	5,755
Female	31	172	315	392	359	268	252	297	382	450	457	453	375	354	1,193	5,750
Race(%):	White (81.1)		Black (0.8)		Native American (13.4)		Asian/Pacific Islander (0.3)		Multiple Ethnicity (%)		Hispanic (0.9)					

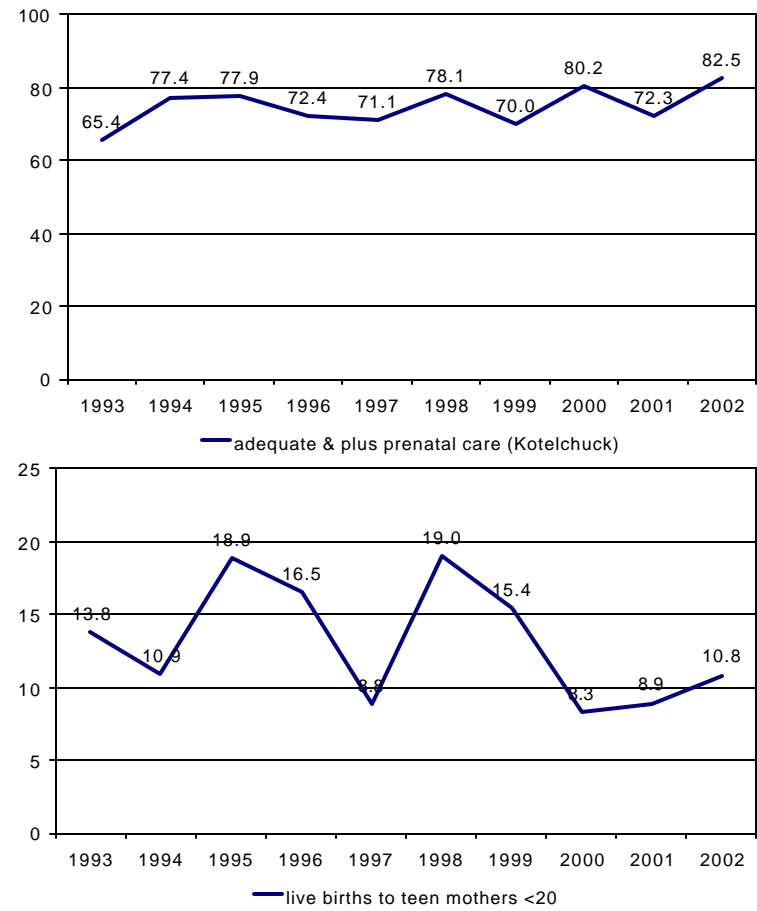
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	130	137	122	127	114	105	130	96	101	120
White	95	108	90	107	93	92	100	78	85	99
Black	1	---	2	---	---	---	---	---	1	---
American Indian	32	28	28	20	20	13	28	17	15	21
Asian & P.I.	2	---	2	---	1	---	2	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	3	---	0	---	1	---	1	---	1	---	0	---	2	---	2	---	1	---	1	---
1,500-2,499	2	---	2	---	3	---	6	4.7	2	---	3	---	3	---	2	---	5	---	8	6.7
Total < 2500	5	---	2	---	4	---	7	5.5	3	---	3	---	5	---	4	---	6	5.9	9	7.5
Preterm																				
Preterm < 37 weeks	10	7.7	8	5.8	8	6.6	10	7.9	6	5.3	10	9.5	8	6.2	5	---	10	9.9	8	6.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	85	65.4	106	77.4	95	77.9	92	72.4	81	71.1	82	78.1	91	70.0	77	80.2	73	72.3	99	82.5
Live Births to Teen Mothers																				
< 18	7	5.4	4	---	9	7.4	5	---	0	---	6	5.7	6	4.6	4	---	3	---	3	---
18-19	11	8.5	11	8.0	14	11.5	16	12.6	10	8.8	14	13.3	14	10.8	4	---	6	5.9	10	8.3
Total under 20	18	13.8	15	10.9	23	18.9	21	16.5	10	8.8	20	19.0	20	15.4	8	8.3	9	8.9	13	10.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	0	---	1	---	0	---	1	---	1	---	1	---	0	---	2	---	0	---
Infant deaths	1	---	0	---	0	---	2	---	1	---	0	---	1	---	2	---	0	---	0	---
Neonatal	0	---	0	---	0	---	2	---	0	---	0	---	1	---	1	---	0	---	0	---
Postneonatal	1	---	0	---	0	---	0	---	1	---	0	---	0	---	1	---	0	---	0	---
Age one to nine	0	---	0	---	1	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	0	---	1	---	0	---	2	---	2	---	3	---	0	---	1	---	0	---	3	---

*If number is less than 6, the rate is not calculated.

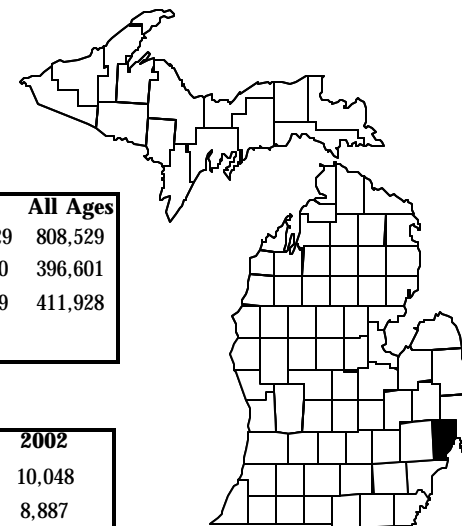
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Macomb County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	10,146	50,978	53,359	55,865	49,537	48,797	51,376	62,473	65,513	67,728	62,038	53,690	43,826	33,620	109,729	808,529
Male	5,200	21,074	27,544	28,786	25,579	24,616	25,923	31,745	33,269	34,140	30,980	26,504	21,352	15,959	43,930	396,601
Female	4,946	19,758	25,815	27,079	23,958	24,181	25,453	30,728	32,244	33,588	31,058	27,186	22,474	17,661	65,799	411,928
Race(%):	White (92.2)		Black (3.6)		Native American (0.3)		Asian/Pacific Islander (2.6)		Multiple Race (1.2)		Hispanic (1.8)					

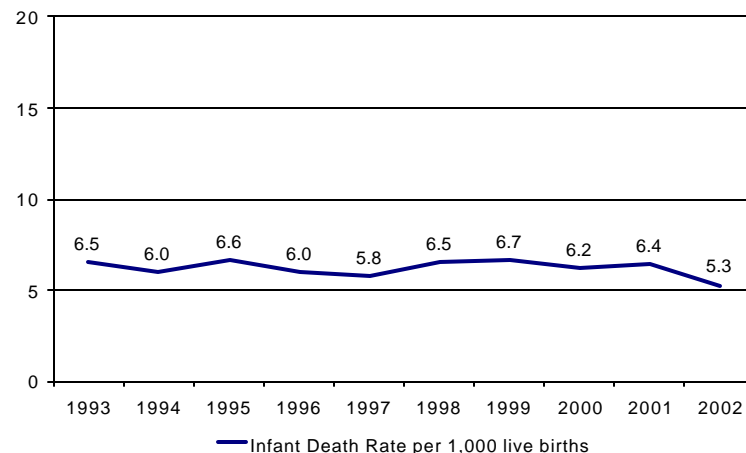
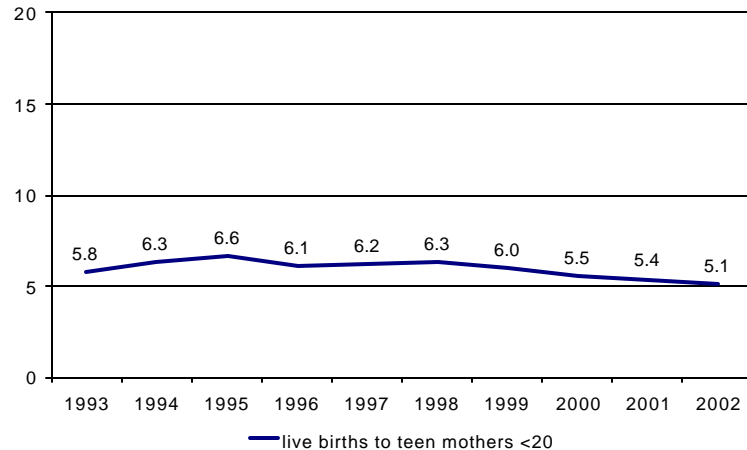
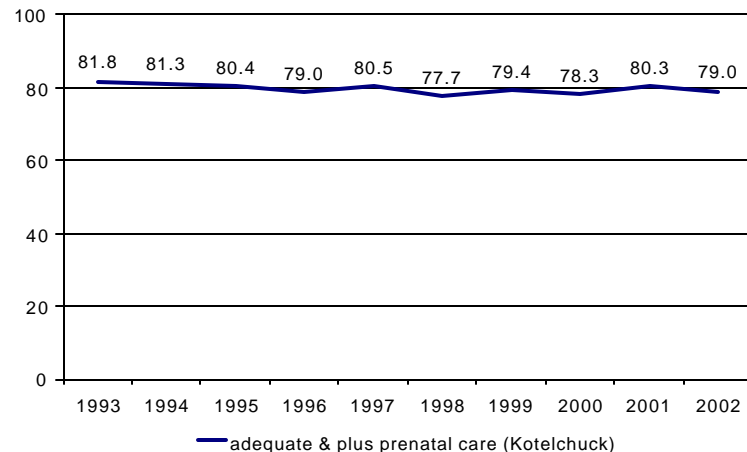
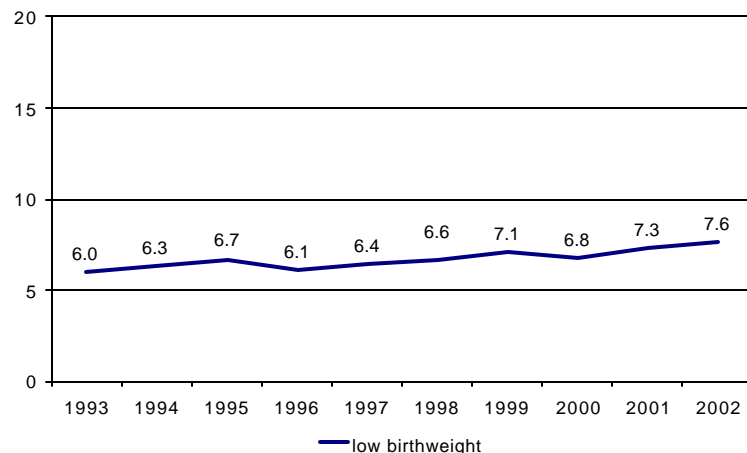
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	9,643	9,806	9,735	9,885	9,776	9,897	9,899	10,332	10,105	10,048
White	9,238	9,257	9,206	9,267	9,117	9,233	9,079	9,358	9,085	8,887
Black	202	238	223	259	246	267	315	394	440	511
American Indian	30	53	40	40	29	33	46	27	31	31
Asian & P.I.	96	162	173	190	286	308	387	408	442	510

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	101	1.0	125	1.3	131	1.3	107	1.1	113	1.2	120	1.2	133	1.3	128	1.2	150	1.5	130	1.3
1,500-2,499	478	5.0	493	5.0	521	5.4	494	5.0	513	5.2	537	5.4	566	5.7	571	5.5	591	5.8	632	6.3
Total < 2500	579	6.0	618	6.3	652	6.7	601	6.1	626	6.4	657	6.6	699	7.1	699	6.8	741	7.3	762	7.6
Preterm																				
Preterm < 37 weeks	841	8.7	889	9.1	929	9.5	917	9.3	926	9.5	970	9.8	1,042	10.5	1,062	10.3	1,072	10.6	1,085	10.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	7,888	81.8	7,970	81.3	7,830	80.4	7,814	79.0	7,865	80.5	7,692	77.7	7,857	79.4	8,094	78.3	8,113	80.3	7,939	79.0
Live Births to Teen Mothers																				
< 18	175	1.8	212	2.2	205	2.1	195	2.0	162	1.7	159	1.6	171	1.7	145	1.4	142	1.4	123	1.2
18-19	386	4.0	403	4.1	441	4.5	411	4.2	441	4.5	464	4.7	424	4.3	427	4.1	402	4.0	389	3.9
Total under 20	561	5.8	615	6.3	646	6.6	606	6.1	603	6.2	623	6.3	595	6.0	572	5.5	544	5.4	512	5.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	46	---	56	---	53	---	56	---	63	---	54	---	49	---	42	---	34	---	58	---
Infant deaths	63	6.5	59	6.0	64	6.6	59	6.0	57	5.8	64	6.5	66	6.7	64	6.2	65	6.4	53	5.3
Neonatal	44	4.6	40	4.1	48	4.9	36	3.6	42	4.3	44	4.4	49	4.9	44	4.3	43	4.3	38	3.8
Postneonatal	19	2.0	19	1.9	16	1.6	23	2.3	15	1.5	20	2.0	17	1.7	20	1.9	22	2.2	15	1.5
Age one to nine	26	---	18	---	22	---	23	---	16	---	13	---	9	---	14	---	13	---	13	---
Age ten to nineteen	34	---	33	---	35	---	31	---	38	---	29	---	24	---	31	---	31	---	32	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.0	2.1	0.9	Maternal health/prematurity
1500g+	Fetal	1.3	1.1	0.2	Maternal care
	Neonatal	1.4	1.2	0.2	Newborn care
	Postneonatal	1.3	1.0	0.3	Infant health
Total		7.0	5.4	1.6	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

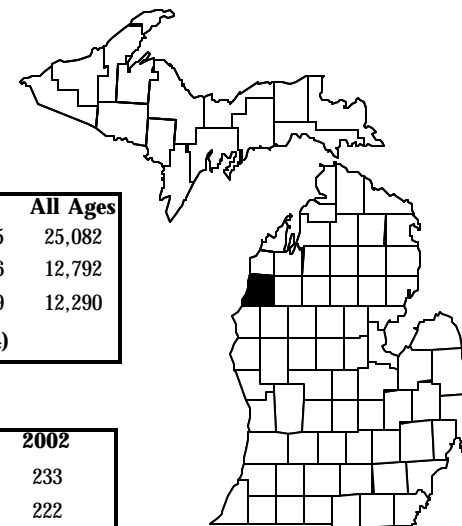
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Manistee County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	253	1,287	1,413	1,628	1,722	1,428	1,323	1,473	1,688	1,928	2,010	1,820	1,502	1,345	4,515	25,082
Male	141	523	731	882	906	802	749	812	899	989	1,015	913	770	654	2,006	12,792
Female	112	511	682	746	816	626	574	661	789	939	995	907	732	691	2,509	12,290
Race(%):	White (95.1)		Black (1.9)		Native American (1.5)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (0.9)		Hispanic (2.4)					

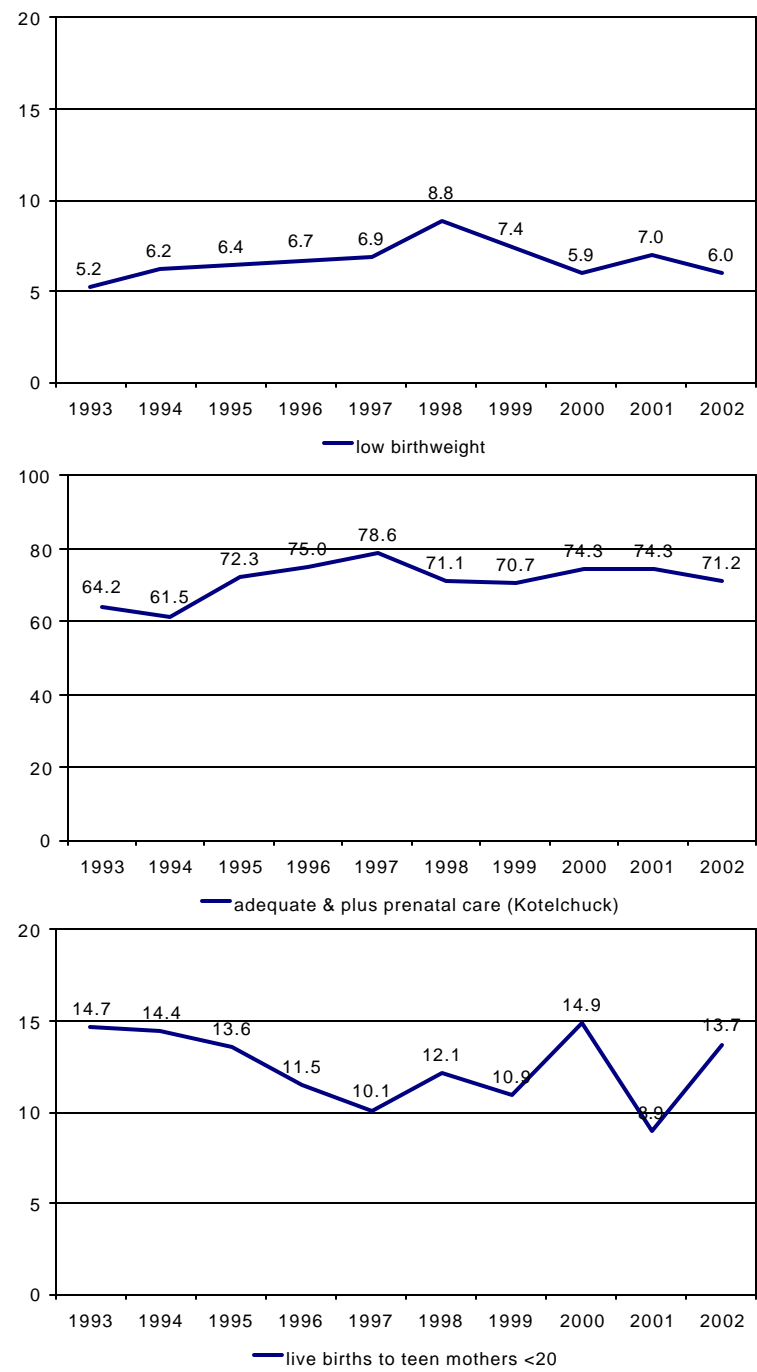
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	232	257	264	208	248	239	229	269	257	233
White	225	247	258	204	243	234	219	265	248	222
Black	1	1	1	1	---	1	1	1	1	---
American Indian	3	8	3	3	2	3	5	2	5	6
Asian & P.I.	2	1	---	---	1	1	2	1	2	4

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	1	---	3	---	4	---	2	---	7	2.9	1	---	2	---	4	---	2	---
1,500-2,499	11	4.7	15	5.8	14	5.3	10	4.8	15	6.0	14	5.9	16	7.0	14	5.2	14	5.4	12	5.2
Total < 2500	12	5.2	16	6.2	17	6.4	14	6.7	17	6.9	21	8.8	17	7.4	16	5.9	18	7.0	14	6.0
Preterm																				
Preterm < 37 weeks	18	7.8	21	8.2	23	8.7	24	11.5	25	10.1	35	14.6	25	10.9	31	11.5	39	15.2	25	10.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	149	64.2	158	61.5	191	72.3	156	75.0	195	78.6	170	71.1	162	70.7	200	74.3	191	74.3	166	71.2
Live Births to Teen Mothers																				
< 18	9	3.9	6	2.3	12	4.5	7	3.4	10	4.0	4	---	11	4.8	15	5.6	6	2.3	9	3.9
18-19	25	10.8	31	12.1	24	9.1	17	8.2	15	6.0	25	10.5	14	6.1	25	9.3	17	6.6	23	9.9
Total under 20	34	14.7	37	14.4	36	13.6	24	11.5	25	10.1	29	12.1	25	10.9	40	14.9	23	8.9	32	13.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	4	---	2	---	3	---	3	---	0	---	1	---	3	---	1	---	1	---	2	---
Infant deaths	1	---	1	---	3	---	3	---	1	---	1	---	1	---	0	---	2	---	2	---
Neonatal	0	---	1	---	1	---	1	---	1	---	1	---	0	---	0	---	2	---	2	---
Postneonatal	1	---	0	---	2	---	2	---	0	---	0	---	1	---	0	---	0	---	0	---
Age one to nine	1	---	0	---	1	---	2	---	1	---	1	---	0	---	0	---	0	---	1	---
Age ten to nineteen	1	---	1	---	1	---	2	---	0	---	4	---	3	---	0	---	1	---	4	---

*If number is less than 6, the rate is not calculated.

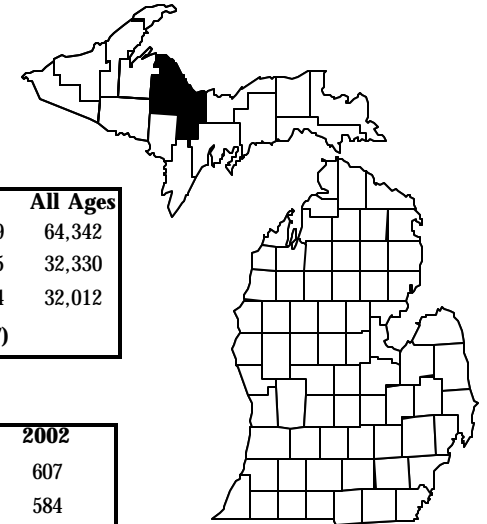
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Marquette County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	533	2,941	3,475	3,916	5,256	6,201	4,057	3,718	4,221	4,998	5,526	4,902	3,590	2,722	8,819	64,342
Male	276	1,208	1,801	1,987	2,627	3,161	2,211	1,942	2,185	2,455	2,814	2,603	1,896	1,369	3,795	32,330
Female	257	1,200	1,674	1,929	2,629	3,040	1,846	1,776	2,036	2,543	2,712	2,299	1,694	1,353	5,024	32,012
Race(%):	White (95.5)		Black (1.5)		Native American (1.4)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (0.1)		Hispanic (0.7)					

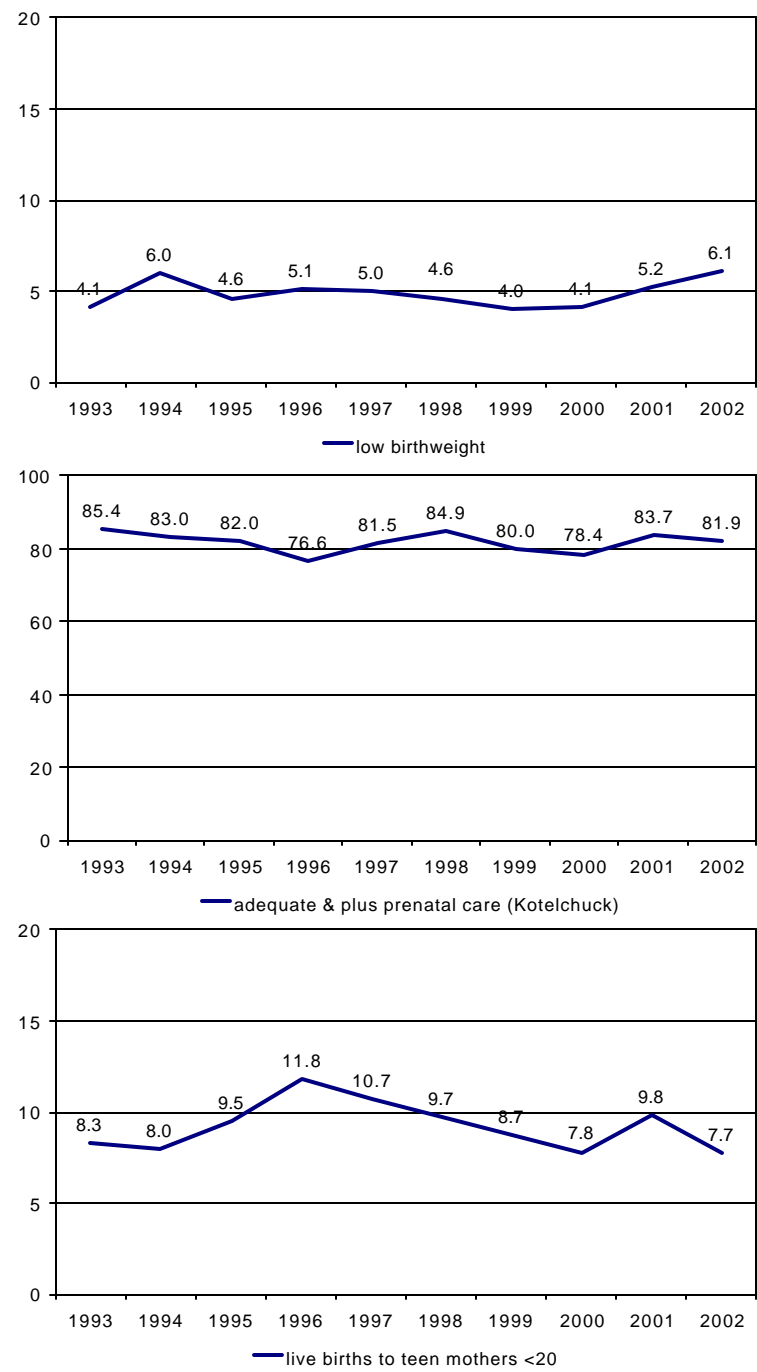
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	933	852	716	650	638	589	575	603	613	607
White	889	798	688	631	613	565	557	588	574	584
Black	6	10	1	3	2	1	2	2	1	3
American Indian	26	29	21	12	18	15	10	8	25	14
Asian & P.I.	12	12	6	2	3	6	4	2	7	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	5	---	8	0.9	11	1.5	8	1.2	4	---	8	1.4	5	---	1	---	4	---	9	1.5
1,500-2,499	33	3.5	43	5.0	22	3.1	25	3.8	28	4.4	19	3.2	18	3.1	24	4.0	28	4.6	28	4.6
Total < 2500	38	4.1	51	6.0	33	4.6	33	5.1	32	5.0	27	4.6	23	4.0	25	4.1	32	5.2	37	6.1
Preterm																				
Preterm < 37 weeks	68	7.3	74	8.7	56	7.8	49	7.5	56	8.8	52	8.8	49	8.5	49	8.1	63	10.3	54	8.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	797	85.4	707	83.0	587	82.0	498	76.6	520	81.5	500	84.9	460	80.0	473	78.4	513	83.7	497	81.9
Live Births to Teen Mothers																				
< 18	23	2.5	18	2.1	21	2.9	26	4.0	22	3.4	15	2.5	10	1.7	14	2.3	20	3.3	9	1.5
18-19	54	5.8	50	5.9	47	6.6	51	7.8	46	7.2	42	7.1	40	7.0	33	5.5	40	6.5	38	6.3
Total under 20	77	8.3	68	8.0	68	9.5	77	11.8	68	10.7	57	9.7	50	8.7	47	7.8	60	9.8	47	7.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	3	---	0	---	2	---	4	---	0	---	3	---	4	---	2	---	1	---
Infant deaths	7	7.5	7	8.2	5	---	4	---	3	---	7	11.9	3	---	3	---	4	---	5	---
Neonatal	3	---	6	7.0	5	---	3	---	1	---	4	---	2	---	3	---	1	---	4	---
Postneonatal	4	---	1	---	0	---	1	---	2	---	3	---	1	---	0	---	3	---	1	---
Age one to nine	2	---	1	---	2	---	1	---	1	---	0	---	1	---	0	---	1	---	2	---
Age ten to nineteen	5	---	6	---	6	---	5	---	9	---	2	---	3	---	0	---	4	---	2	---

*If number is less than 6, the rate is not calculated.

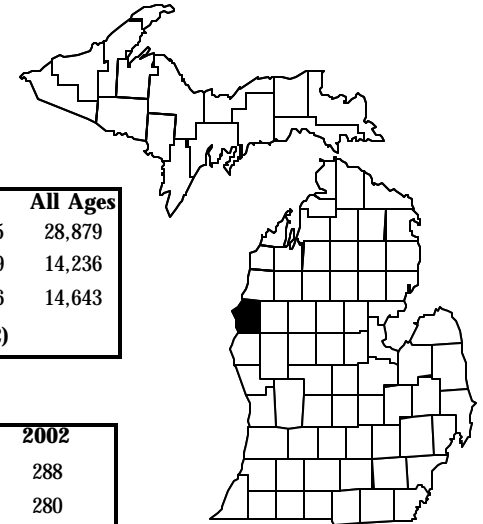
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Mason County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	387	1,655	1,721	2,114	2,049	1,716	1,400	1,650	1,949	2,237	2,309	2,032	1,737	1,555	4,755	28,879
Male	189	634	889	1,109	1,068	854	725	828	975	1,112	1,120	1,038	863	763	2,069	14,236
Female	198	634	832	1,005	981	862	675	822	974	1,125	1,189	994	874	792	2,686	14,643
Race(%):	White (97.0)		Black (0.9)		Native American (0.8)		Asian/Pacific Islander (0.2)		Multiple Ethnicity (0.1)		Hispanic (3.2)					

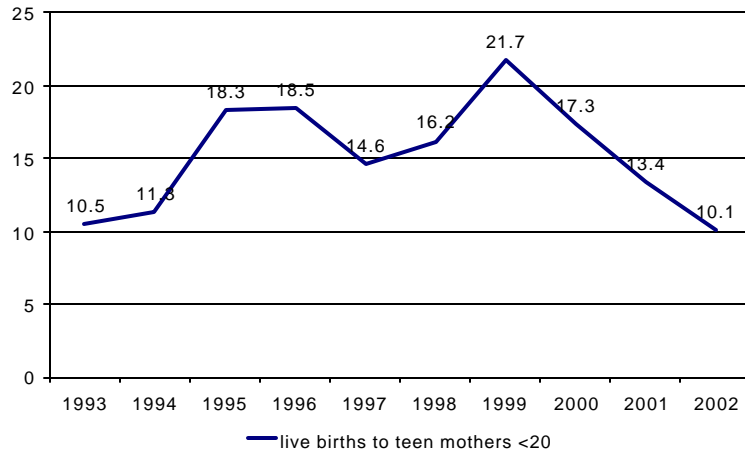
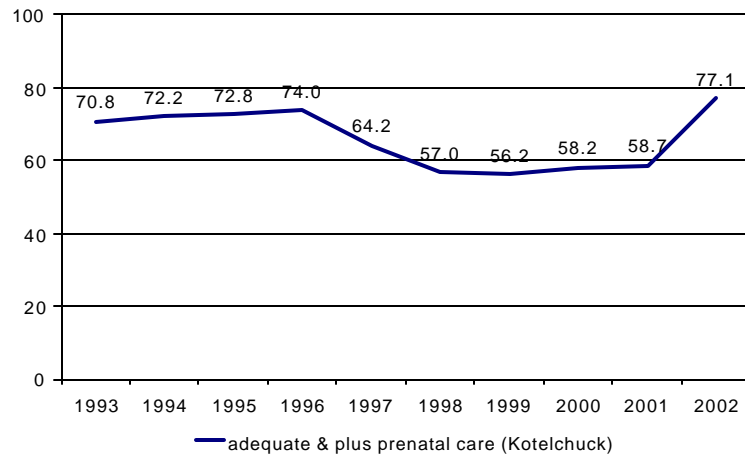
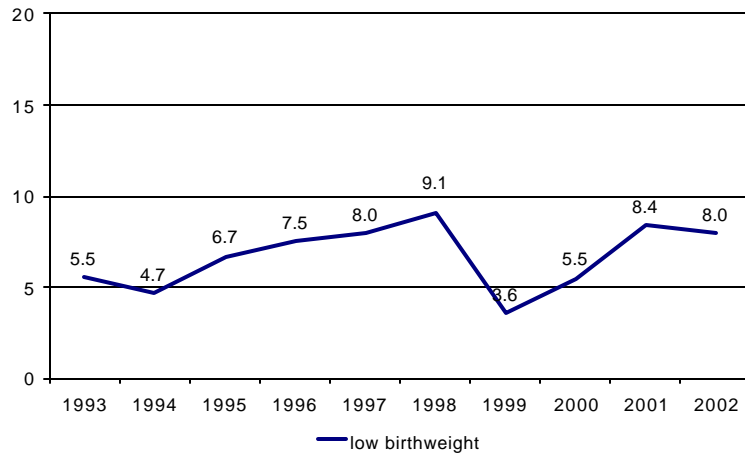
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	325	320	327	281	288	309	281	364	298	288
White	311	300	323	275	279	302	275	356	292	280
Black	4	1	1	3	1	2	1	---	3	---
American Indian	9	15	3	3	8	3	4	6	2	4
Asian & P.I.	---	3	---	---	---	---	---	1	1	3

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	1	---	3	---	7	2.5	4	---	4	---	2	---	2	---	4	---	5	---
1,500-2,499	16	4.9	14	4.4	19	5.8	14	5.0	19	6.6	24	7.8	8	2.8	18	4.9	21	7.0	18	6.3
Total < 2500	18	5.5	15	4.7	22	6.7	21	7.5	23	8.0	28	9.1	10	3.6	20	5.5	25	8.4	23	8.0
Preterm																				
Preterm < 37 weeks	20	6.2	23	7.2	35	10.7	27	9.6	36	12.5	32	10.4	27	9.6	26	7.1	34	11.4	27	9.4
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	230	70.8	231	72.2	238	72.8	208	74.0	185	64.2	176	57.0	158	56.2	212	58.2	175	58.7	222	77.1
Live Births to Teen Mothers																				
< 18	10	3.1	10	3.1	27	8.3	25	8.9	17	5.9	17	5.5	22	7.8	19	5.2	13	4.4	8	2.8
18-19	24	7.4	26	8.1	33	10.1	27	9.6	25	8.7	33	10.7	39	13.9	44	12.1	27	9.1	21	7.3
Total under 20	34	10.5	36	11.3	60	18.3	52	18.5	42	14.6	50	16.2	61	21.7	63	17.3	40	13.4	29	10.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	2	---	1	---	0	---	0	---	2	---	2	---	0	---	0	---	5	---
Infant deaths	3	---	0	---	3	---	1	---	5	---	3	---	1	---	5	---	4	---	1	---
Neonatal	2	---	0	---	3	---	1	---	3	---	1	---	1	---	3	---	4	---	1	---
Postneonatal	1	---	0	---	0	---	0	---	2	---	2	---	0	---	2	---	0	---	0	---
Age one to nine	6	---	1	---	0	---	0	---	0	---	1	---	2	---	2	---	3	---	1	---
Age ten to nineteen	6	---	2	---	1	---	5	---	3	---	2	---	4	---	0	---	2	---	2	---

*If number is less than 6, the rate is not calculated.

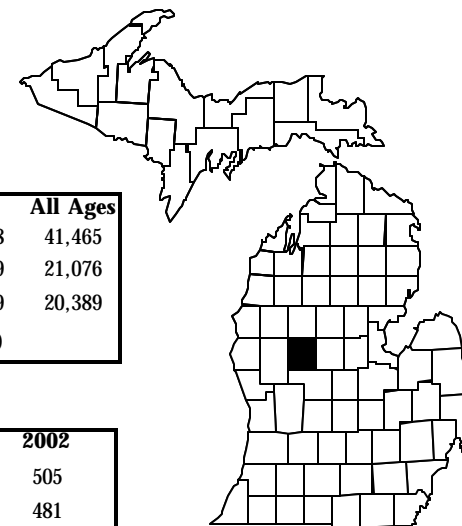
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Mecosta County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	462	2,405	2,448	2,637	4,203	5,326	2,921	2,190	2,334	2,584	2,486	2,386	2,079	1,998	5,468	41,465
Male	253	986	1,277	1,338	2,238	3,017	1,592	1,122	1,123	1,273	1,191	1,202	1,004	971	2,489	21,076
Female	209	957	1,171	1,299	1,965	2,309	1,329	1,068	1,211	1,311	1,295	1,184	1,075	1,027	2,979	20,389
Race(%):	White (93.2)		Black (3.8)		Native American (0.6)		Asian/Pacific Islander (0.9)		Multiple Ethnicity(%)		Hispanic (1.3)					

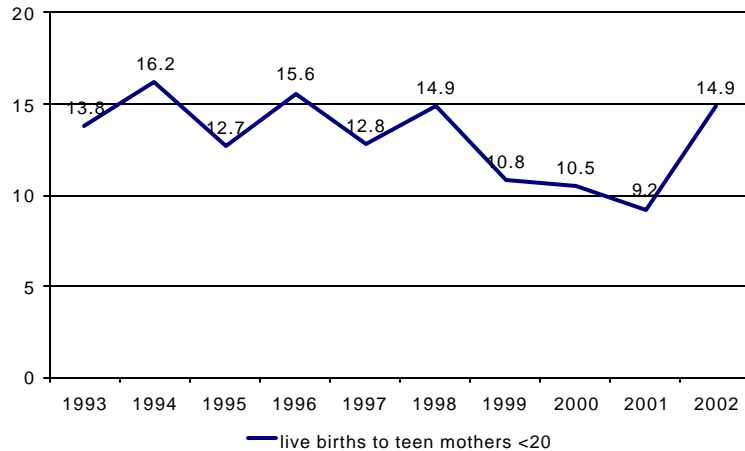
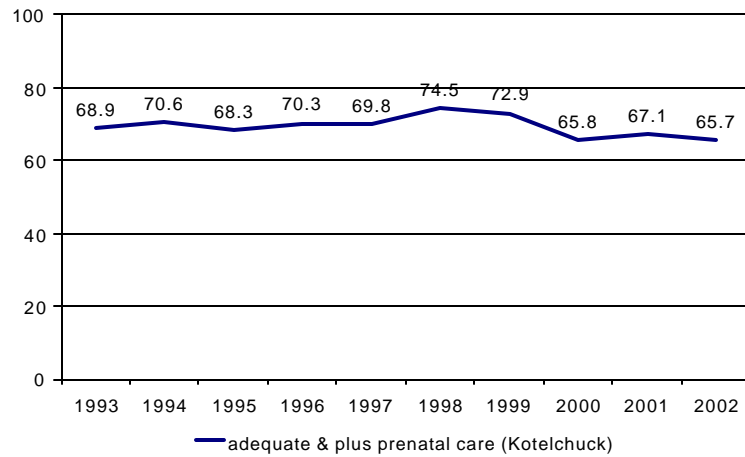
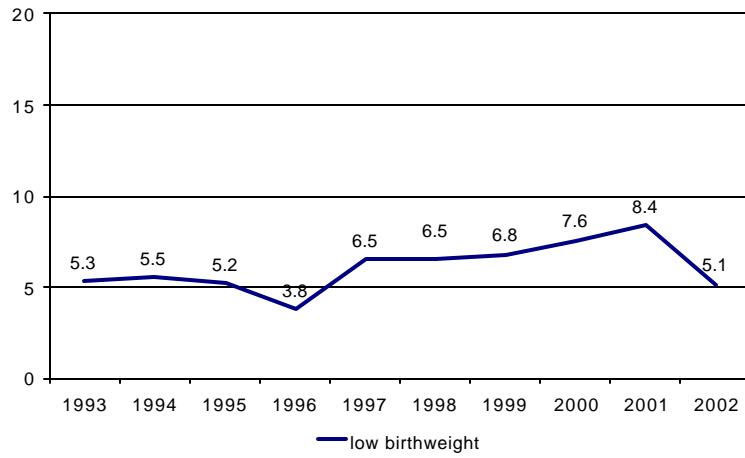
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	470	401	458	448	444	490	499	488	477	505
White	441	378	426	418	414	459	456	444	430	481
Black	21	14	21	21	23	24	28	23	30	16
American Indian	5	5	1	4	2	5	9	8	5	2
Asian & P.I.	2	4	8	3	2	2	6	12	8	4

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	3	---	6	1.5	2	---	4	---	4	---	11	2.2	5	---	10	2.0	6	1.3	7	1.4
1,500-2,499	22	4.7	16	4.0	22	4.8	13	2.9	25	5.6	21	4.3	29	5.8	27	5.5	34	7.1	19	3.8
Total < 2500	25	5.3	22	5.5	24	5.2	17	3.8	29	6.5	32	6.5	34	6.8	37	7.6	40	8.4	26	5.1
Preterm																				
Preterm < 37 weeks	33	7.0	36	9.0	35	7.6	33	7.4	38	8.6	52	10.6	39	7.8	44	9.0	43	9.0	42	8.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	324	68.9	283	70.6	313	68.3	315	70.3	310	69.8	365	74.5	364	72.9	321	65.8	320	67.1	332	65.7
Live Births to Teen Mothers																				
< 18	22	4.7	19	4.7	17	3.7	22	4.9	14	3.2	23	4.7	11	2.2	16	3.3	8	1.7	23	4.6
18-19	43	9.1	46	11.5	41	9.0	48	10.7	43	9.7	50	10.2	43	8.6	35	7.2	36	7.5	52	10.3
Total under 20	65	13.8	65	16.2	58	12.7	70	15.6	57	12.8	73	14.9	54	10.8	51	10.5	44	9.2	75	14.9
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	2	---	0	---	4	---	5	---	3	---	1	---	2	---	2	---	3	---
Infant deaths	2	---	3	---	3	---	2	---	3	---	9	18.4	2	---	4	---	4	---	4	---
Neonatal	2	---	3	---	1	---	2	---	3	---	5	---	2	---	1	---	3	---	4	---
Postneonatal	0	---	0	---	2	---	0	---	0	---	4	---	0	---	3	---	1	---	0	---
Age one to nine	5	---	4	---	1	---	3	---	0	---	2	---	1	---	0	---	1	---	2	---
Age ten to nineteen	2	---	5	---	0	---	1	---	4	---	3	---	1	---	4	---	3	---	6	---

*If number is less than 6, the rate is not calculated.

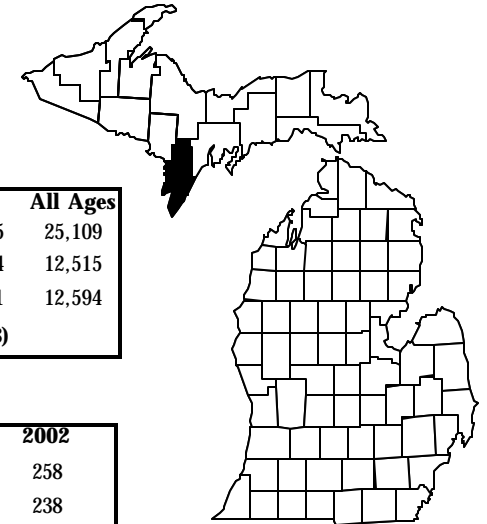
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Menominee County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	234	1,328	1,481	1,722	1,783	1,546	1,162	1,312	1,743	2,076	2,180	1,791	1,414	1,246	4,325	25,109
Male	124	543	776	887	903	810	621	663	903	1,062	1,100	934	696	629	1,864	12,515
Female	110	551	705	835	880	736	541	649	840	1,014	1,080	857	718	617	2,461	12,594
Race(%):	White (96.5)		Black (0.3)		Native American (2.2)		Asian/Pacific Islander (0.2)		Multiple Ethnicity (0.8)		Hispanic (0.8)					

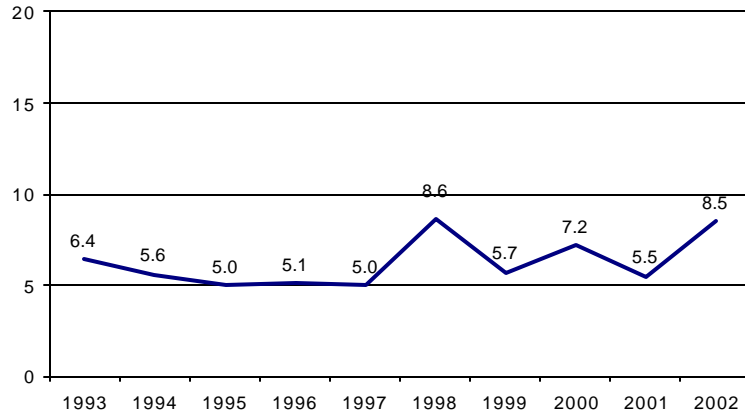
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	266	270	262	292	218	326	262	265	292	258
White	257	260	244	277	206	306	250	249	278	238
Black	---	---	---	---	---	1	2	---	---	1
American Indian	8	9	15	13	12	17	9	16	14	18
Asian & P.I.	---	1	3	2	---	2	1	---	---	1

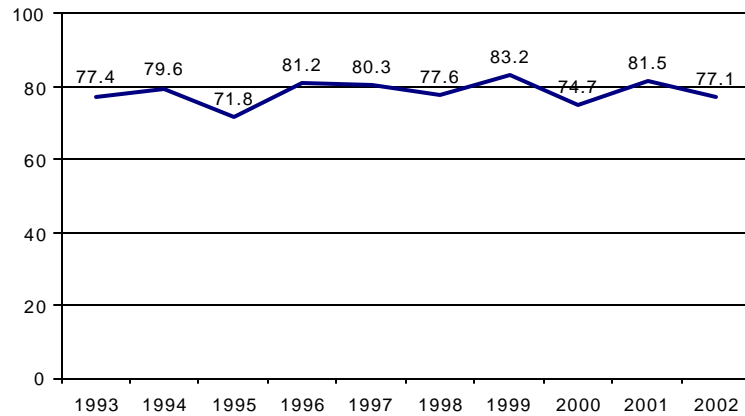
	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	3	---	1	---	1	---	1	---	5	---	2	---	2	---	2	---	9	3.5
1,500-2,499	13	4.9	12	4.4	12	4.6	14	4.8	10	4.6	23	7.1	13	5.0	17	6.4	14	4.8	13	5.0
Total < 2500	17	6.4	15	5.6	13	5.0	15	5.1	11	5.0	28	8.6	15	5.7	19	7.2	16	5.5	22	8.5
Preterm																				
Preterm < 37 weeks	25	9.4	31	11.5	17	6.5	26	8.9	17	7.8	28	8.6	22	8.4	22	8.3	23	7.9	16	6.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	206	77.4	215	79.6	188	71.8	237	81.2	175	80.3	253	77.6	218	83.2	198	74.7	238	81.5	199	77.1
Live Births to Teen Mothers																				
< 18	11	4.1	10	3.7	12	4.6	11	3.8	6	2.8	15	4.6	6	2.3	12	4.5	6	2.1	14	5.4
18-19	20	7.5	20	7.4	23	8.8	27	9.2	15	6.9	34	10.4	18	6.9	26	9.8	31	10.6	30	11.6
Total under 20	31	11.7	30	11.1	35	13.4	38	13.0	21	9.6	49	15.0	24	9.2	38	14.3	37	12.7	44	17.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	0	---	2	---	2	---	0	---	0	---	1	---	2	---	1	---	0	---
Infant deaths	2	---	3	---	2	---	1	---	1	---	1	---	2	---	0	---	3	---	2	---
Neonatal	2	---	2	---	1	---	0	---	1	---	1	---	1	---	0	---	2	---	2	---
Postneonatal	0	---	1	---	1	---	1	---	0	---	0	---	1	---	0	---	1	---	0	---
Age one to nine	2	---	0	---	0	---	2	---	0	---	0	---	0	---	2	---	0	---	0	---
Age ten to nineteen	3	---	5	---	3	---	1	---	2	---	3	---	2	---	4	---	2	---	2	---

*If number is less than 6, the rate is not calculated.

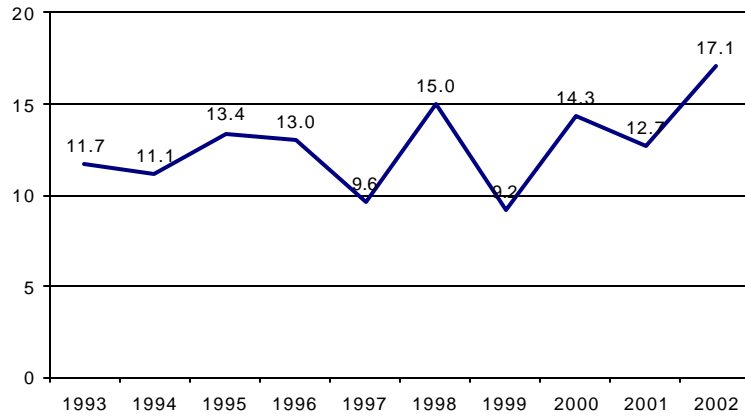
TRENDS (1993-2002)



— low birthweight



— adequate & plus prenatal care (Kotelchuck)

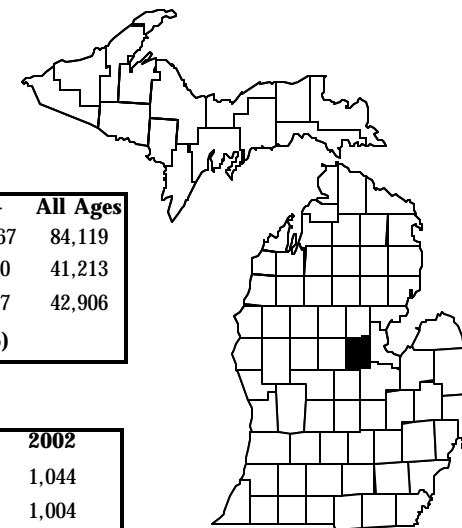


— live births to teen mothers <20

MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Midland County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,110	5,295	5,860	6,681	6,468	5,472	4,404	5,318	6,513	7,117	6,722	5,924	4,429	3,549	10,367	84,119
Male	561	2,135	2,948	3,424	3,392	2,877	2,178	2,590	3,180	3,513	3,321	2,879	2,168	1,697	4,350	41,213
Female	549	2,050	2,912	3,257	3,076	2,595	2,226	2,728	3,333	3,604	3,401	3,045	2,261	1,852	6,017	42,906
Race(%):	White (95.9)		Black (1.2)		Native American (0.4)		Asian/Pacific Islander (1.6)		Multiple Race (0.2)		Hispanic (1.5)					

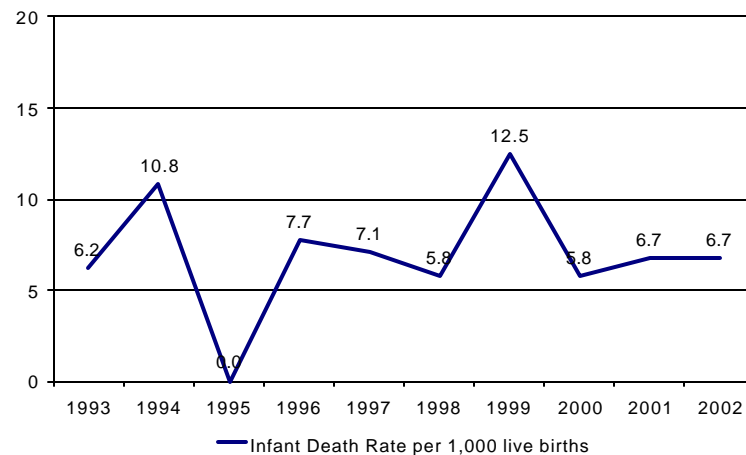
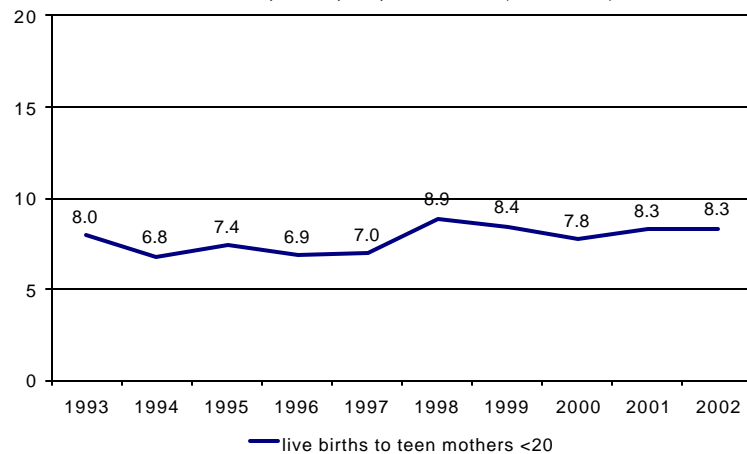
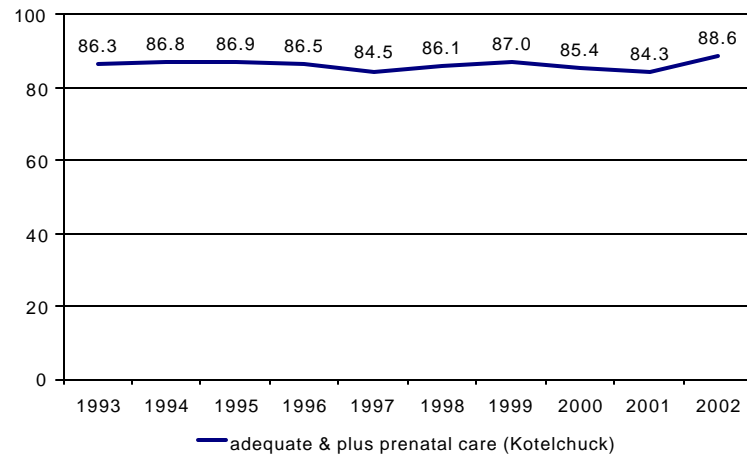
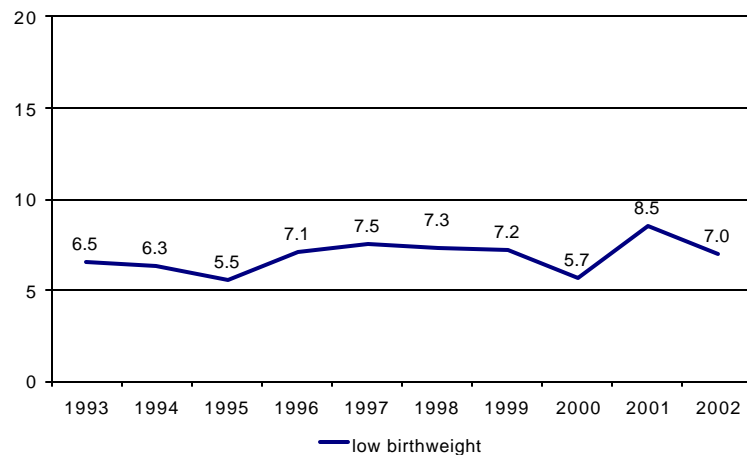
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,131	1,110	1,021	1,036	988	1,027	1,042	1,043	1,039	1,044
White	1,108	1,083	999	1,002	953	995	1,012	1,002	1,003	1,004
Black	10	16	9	9	11	6	9	9	11	17
American Indian	5	3	---	2	2	1	2	4	2	---
Asian & P.I.	7	8	13	23	21	23	18	28	20	22

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	15	1.3	18	1.6	6	0.6	13	1.3	18	1.8	14	1.4	21	2.0	8	0.8	18	1.7	12	1.1
1,500-2,499	59	5.2	52	4.7	50	4.9	61	5.9	56	5.7	61	5.9	54	5.2	51	4.9	70	6.7	61	5.8
Total < 2500	74	6.5	70	6.3	56	5.5	74	7.1	74	7.5	75	7.3	75	7.2	59	5.7	88	8.5	73	7.0
Preterm																				
Preterm < 37 weeks	108	9.5	96	8.6	86	8.4	107	10.3	92	9.3	106	10.3	101	9.7	100	9.6	119	11.5	124	11.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	976	86.3	963	86.8	887	86.9	896	86.5	835	84.5	884	86.1	907	87.0	891	85.4	876	84.3	925	88.6
Live Births to Teen Mothers																				
< 18	28	2.5	20	1.8	17	1.7	26	2.5	25	2.5	32	3.1	24	2.3	27	2.6	18	1.7	25	2.4
18-19	62	5.5	55	5.0	59	5.8	46	4.4	44	4.5	59	5.7	64	6.1	54	5.2	68	6.5	62	5.9
Total under 20	90	8.0	75	6.8	76	7.4	72	6.9	69	7.0	91	8.9	88	8.4	81	7.8	86	8.3	87	8.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	6	---	4	---	4	---	4	---	2	---	5	---	4	---	5	---	1	---
Infant deaths	7	6.2	12	10.8	2	---	8	7.7	7	7.1	6	5.8	13	12.5	6	5.8	7	6.7	7	6.7
Neonatal	3	---	9	8.1	0	---	6	5.8	7	7.1	4	---	6	5.8	4	---	2	---	4	---
Postneonatal	4	---	3	---	2	---	2	---	0	---	2	---	7	6.7	2	---	5	---	3	---
Age one to nine	2	---	5	---	3	---	5	---	3	---	4	---	2	---	2	---	1	---	2	---
Age ten to nineteen	4	---	7	---	6	---	3	---	6	---	7	---	5	---	0	---	3	---	5	---

*If number is less than 6, the rate is not calculated.

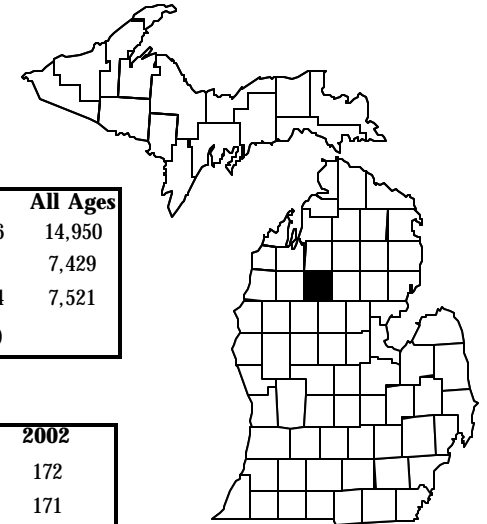
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Missaukee County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	174	916	1,030	1,130	1,195	931	749	936	1,088	1,195	1,092	937	833	752	2,166	14,950
Male	93	406	523	557	607	450	382	490	526	597	567	479	430	350	972	7,429
Female	81	336	507	573	588	481	367	446	562	598	525	458	403	402	1,194	7,521
Race(%):	White (98.0)		Black (0.5)		Native American (0.5)		Asian/Pacific Islander (0.3)		Multiple Race (0.3)		Hispanic (%)		Hispanic (1.2)			

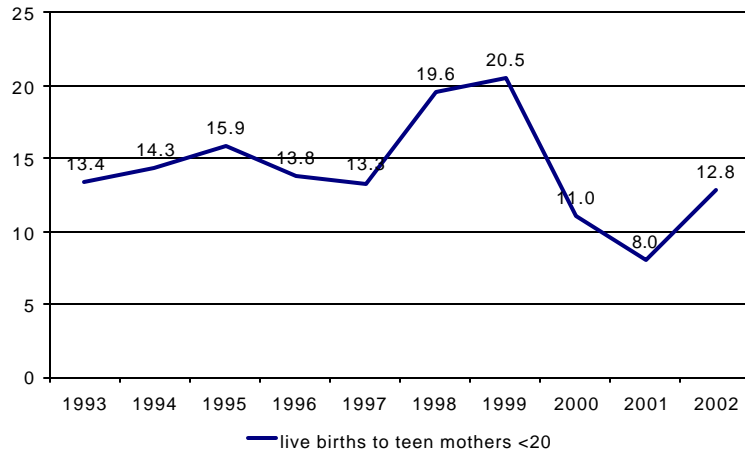
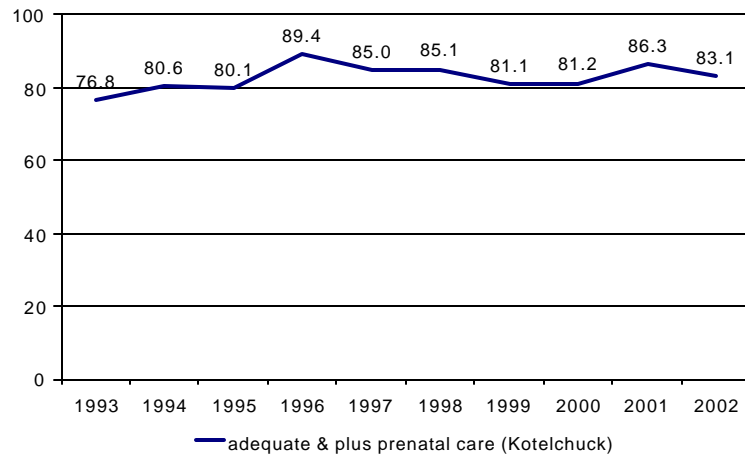
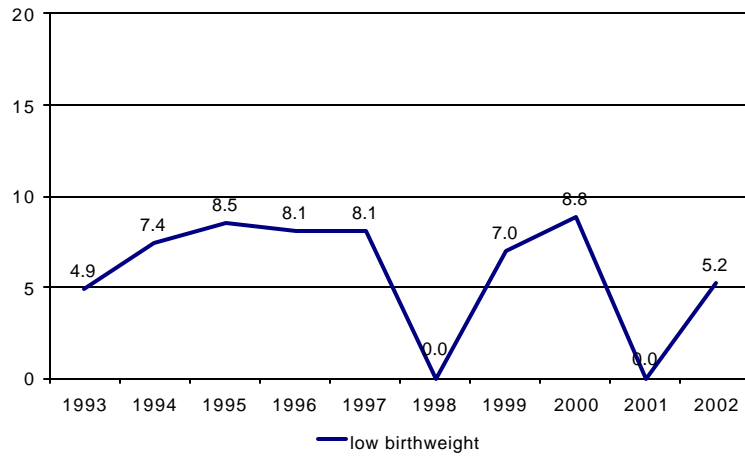
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	164	175	176	160	173	148	185	181	175	172
White	161	175	174	157	172	147	182	177	175	171
Black	---	---	---	---	---	---	---	---	---	---
American Indian	1	---	---	2	1	---	3	2	---	1
Asian & P.I.	1	---	2	1	---	1	---	1	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	0	---	2	---	4	---	3	---	1	---	7	3.8	4	---	1	---	1	---
1,500-2,499	7	4.3	13	7.4	13	7.4	9	5.6	11	6.4	3	---	6	3.2	12	6.6	4	---	8	4.7
Total < 2500	8	4.9	13	7.4	15	8.5	13	8.1	14	8.1	4	---	13	7.0	16	8.8	5	---	9	5.2
Preterm																				
Preterm < 37 weeks	18	11.0	13	7.4	17	9.7	13	8.1	15	8.7	10	6.8	17	9.2	20	11.0	11	6.3	11	6.4
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	126	76.8	141	80.6	141	80.1	143	89.4	147	85.0	126	85.1	150	81.1	147	81.2	151	86.3	143	83.1
Live Births to Teen Mothers																				
< 18	15	9.1	9	5.1	7	4.0	9	5.6	8	4.6	11	7.4	9	4.9	3	---	7	4.0	5	---
18-19	7	4.3	16	9.1	21	11.9	13	8.1	15	8.7	18	12.2	29	15.7	17	9.4	7	4.0	17	9.9
Total under 20	22	13.4	25	14.3	28	15.9	22	13.8	23	13.3	29	19.6	38	20.5	20	11.0	14	8.0	22	12.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---	1	---	1	---
Infant deaths	2	---	0	---	2	---	2	---	0	---	1	---	1	---	3	---	0	---	0	---
Neonatal	1	---	0	---	2	---	1	---	0	---	0	---	1	---	2	---	0	---	0	---
Postneonatal	1	---	0	---	0	---	1	---	0	---	1	---	0	---	1	---	0	---	0	---
Age one to nine	1	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---	2	---
Age ten to nineteen	1	---	0	---	0	---	1	---	2	---	2	---	1	---	0	---	1	---	3	---

*If number is less than 6, the rate is not calculated.

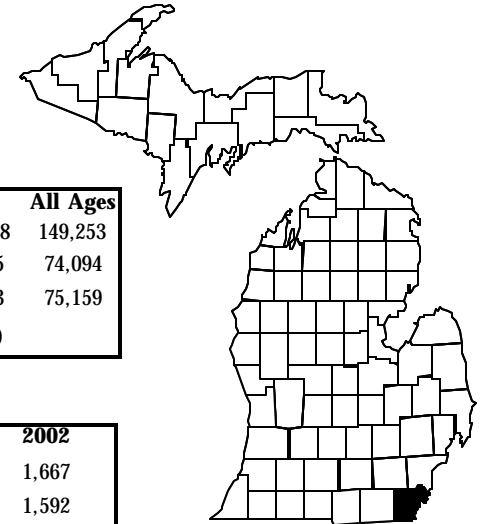
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Monroe County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,719	9,176	10,357	12,107	11,231	9,833	8,391	9,842	11,600	12,637	12,178	10,714	8,215	6,234	16,738	149,253
Male	885	3,890	5,297	6,306	5,862	4,964	4,231	4,917	5,696	6,308	6,127	5,510	4,091	3,115	6,895	74,094
Female	834	3,567	5,060	5,801	5,369	4,869	4,160	4,925	5,904	6,329	6,051	5,204	4,124	3,119	9,843	75,159
Race(%):	White (96.2)		Black (1.9)		Native American (0.3)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (0.1)		Hispanic (2.1)					

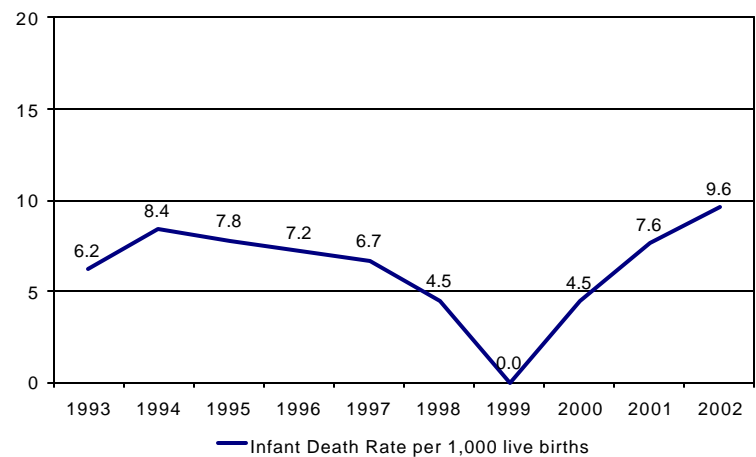
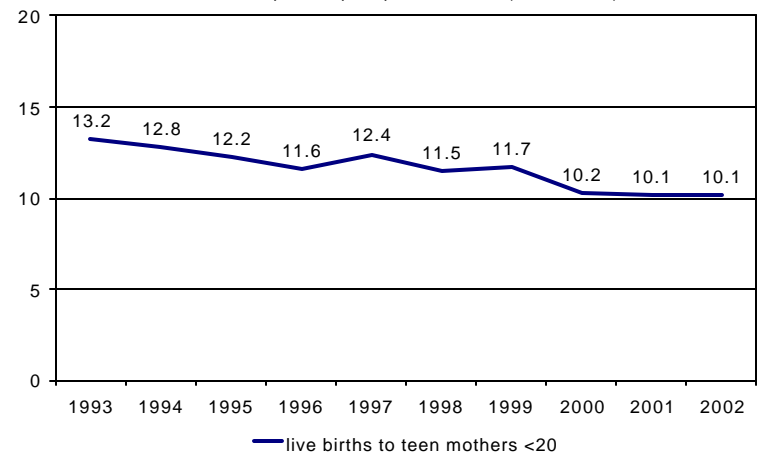
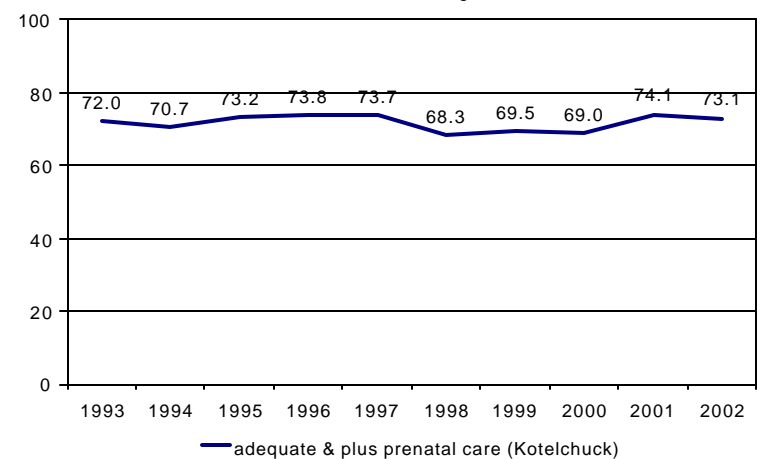
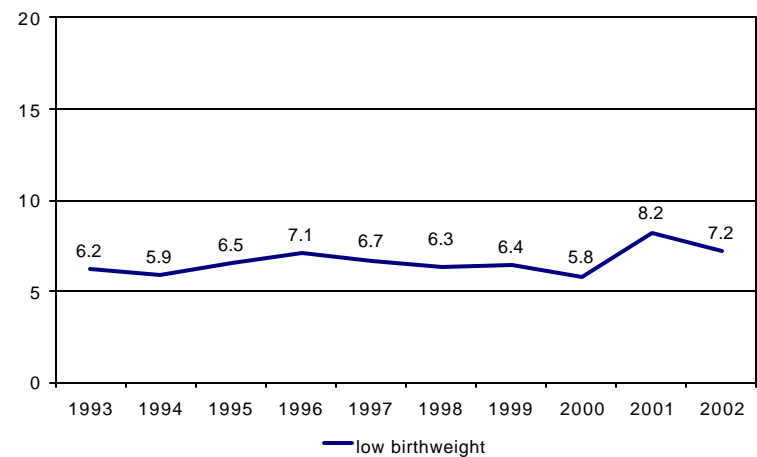
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,608	1,777	1,805	1,798	1,789	1,789	1,699	1,786	1,700	1,667
White	1,568	1,715	1,740	1,738	1,726	1,732	1,636	1,724	1,635	1,592
Black	33	39	33	38	37	42	39	38	49	38
American Indian	1	2	4	4	3	1	4	3	2	5
Asian & P.I.	4	9	12	12	13	9	9	7	10	19

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	16	1.0	16	0.9	23	1.3	27	1.5	20	1.1	13	0.7	15	0.9	10	0.6	33	1.9	27	1.6
1,500-2,499	83	5.2	88	5.0	95	5.3	100	5.6	100	5.6	100	5.6	94	5.5	94	5.3	107	6.3	93	5.6
Total < 2500	99	6.2	104	5.9	118	6.5	127	7.1	120	6.7	113	6.3	109	6.4	104	5.8	140	8.2	120	7.2
Preterm																				
Preterm < 37 weeks	134	8.3	155	8.7	170	9.4	172	9.6	165	9.2	166	9.3	184	10.8	170	9.5	194	11.4	176	10.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,158	72.0	1,257	70.7	1,321	73.2	1,327	73.8	1,319	73.7	1,221	68.3	1,181	69.5	1,233	69.0	1,260	74.1	1,218	73.1
Live Births to Teen Mothers																				
< 18	80	5.0	87	4.9	81	4.5	80	4.4	64	3.6	63	3.5	55	3.2	48	2.7	53	3.1	52	3.1
18-19	132	8.2	141	7.9	139	7.7	129	7.2	157	8.8	143	8.0	144	8.5	135	7.6	119	7.0	117	7.0
Total under 20	212	13.2	228	12.8	220	12.2	209	11.6	221	12.4	206	11.5	199	11.7	183	10.2	172	10.1	169	10.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	6	---	3	---	3	---	4	---	0	---	1	---	7	---	5	---	1	---
Infant deaths	10	6.2	15	8.4	14	7.8	13	7.2	12	6.7	8	4.5	5	---	8	4.5	13	7.6	16	9.6
Neonatal	7	4.4	8	4.5	11	6.1	7	3.9	5	---	2	---	4	---	6	3.4	9	5.3	9	5.4
Postneonatal	3	---	7	3.9	3	---	6	3.3	7	3.9	6	3.4	1	---	2	---	4	---	7	4.2
Age one to nine	2	---	2	---	4	---	6	---	5	---	3	---	1	---	3	---	6	---	5	---
Age ten to nineteen	7	---	12	---	5	---	12	---	10	---	7	---	4	---	7	---	11	---	8	---

*If number is less than 6, the rate is not calculated.

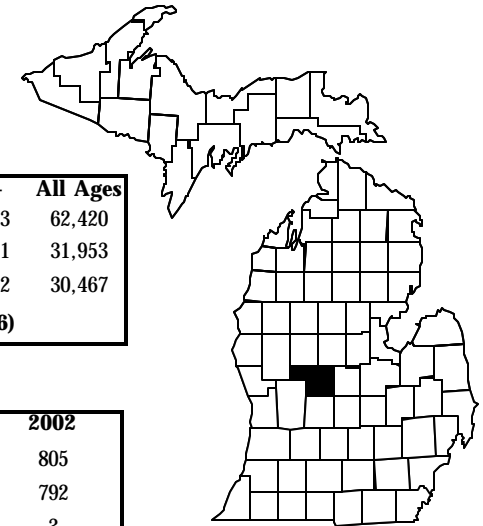
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Montcalm County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	795	3,993	4,286	5,058	4,659	4,170	3,723	4,437	4,737	5,206	4,650	3,870	3,290	2,698	7,643	62,420
Male	388	1,593	2,282	2,476	2,430	2,231	2,022	2,496	2,503	2,800	2,453	1,939	1,677	1,362	3,301	31,953
Female	407	1,605	2,004	2,582	2,229	1,939	1,701	1,941	2,234	2,406	2,197	1,931	1,613	1,336	4,342	30,467
Race(%):	White (95.7)		Black (2.2)		Native American (0.6)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (0.1)		Hispanic (2.6)					

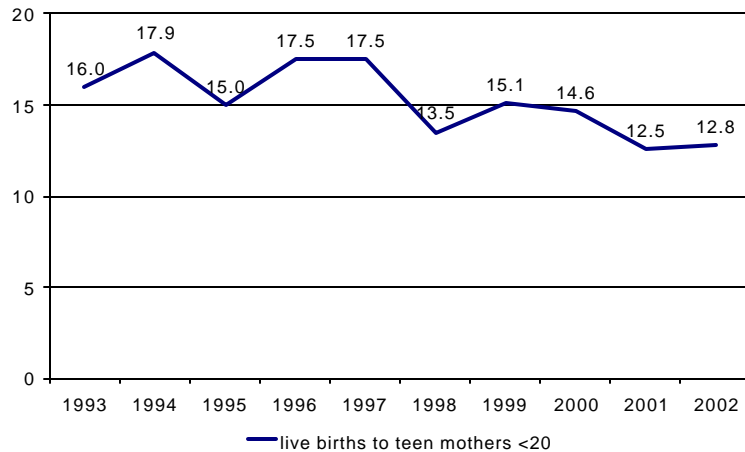
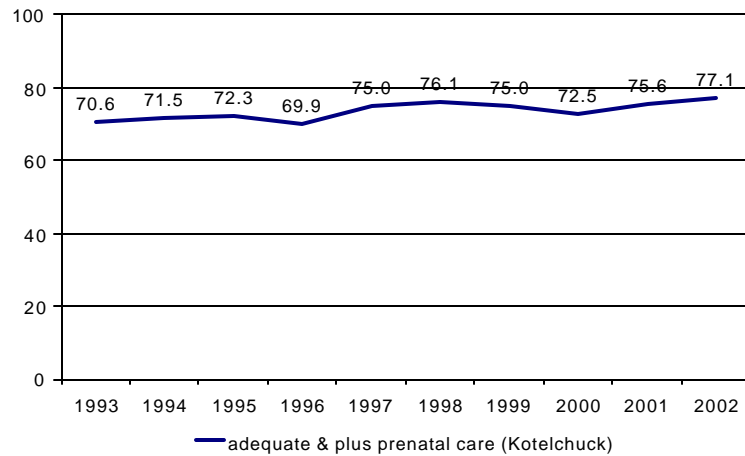
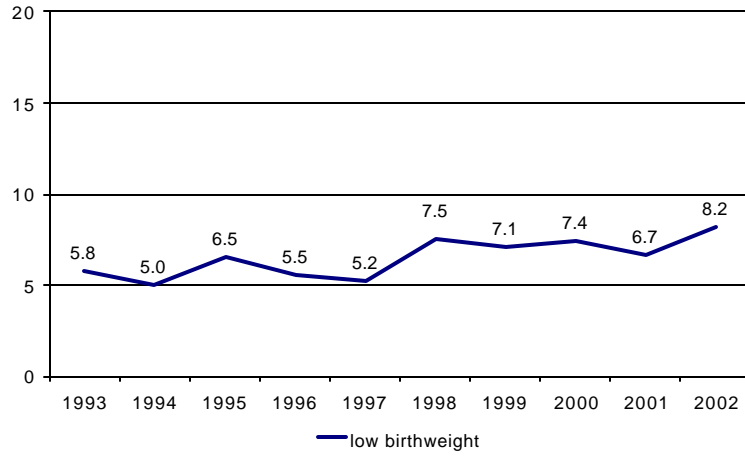
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	807	800	772	787	845	831	833	834	869	805
White	797	786	760	774	825	822	821	819	855	792
Black	2	5	5	1	5	1	1	5	3	3
American Indian	2	5	3	7	6	4	3	---	2	2
Asian & P.I.	4	4	4	4	8	3	8	10	8	3

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	8	1.0	10	1.3	9	1.1	9	1.1	9	1.1	11	1.3	12	1.4	8	0.9	13	1.6
1,500-2,499	43	5.3	32	4.0	40	5.2	34	4.3	35	4.1	53	6.4	48	5.8	50	6.0	50	5.8	53	6.6
Total < 2500	47	5.8	40	5.0	50	6.5	43	5.5	44	5.2	62	7.5	59	7.1	62	7.4	58	6.7	66	8.2
Preterm																				
Preterm < 37 weeks	69	8.6	80	10.0	68	8.8	51	6.5	79	9.3	93	11.2	79	9.5	82	9.8	100	11.5	77	9.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	570	70.6	572	71.5	558	72.3	550	69.9	634	75.0	632	76.1	625	75.0	605	72.5	657	75.6	621	77.1
Live Births to Teen Mothers																				
< 18	51	6.3	44	5.5	34	4.4	51	6.5	47	5.6	36	4.3	39	4.7	41	4.9	31	3.6	36	4.5
18-19	78	9.7	99	12.4	82	10.6	87	11.1	101	12.0	76	9.1	87	10.4	81	9.7	78	9.0	67	8.3
Total under 20	129	16.0	143	17.9	116	15.0	138	17.5	148	17.5	112	13.5	126	15.1	122	14.6	109	12.5	103	12.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	5	---	1	---	5	---	4	---	3	---	9	---	2	---	4	---	9	---	4	---
Infant deaths	6	7.4	3	---	8	10.4	4	---	4	---	10	12.0	9	10.8	1	---	6	6.9	6	7.5
Neonatal	2	---	0	---	4	---	3	---	1	---	6	7.2	6	7.2	1	---	4	---	5	---
Postneonatal	4	---	3	---	4	---	1	---	3	---	4	---	3	---	0	---	2	---	1	---
Age one to nine	3	---	3	---	3	---	3	---	4	---	2	---	5	---	1	---	4	---	0	---
Age ten to nineteen	2	---	4	---	4	---	5	---	4	---	6	---	11	---	12	---	4	---	4	---

*If number is less than 6, the rate is not calculated.

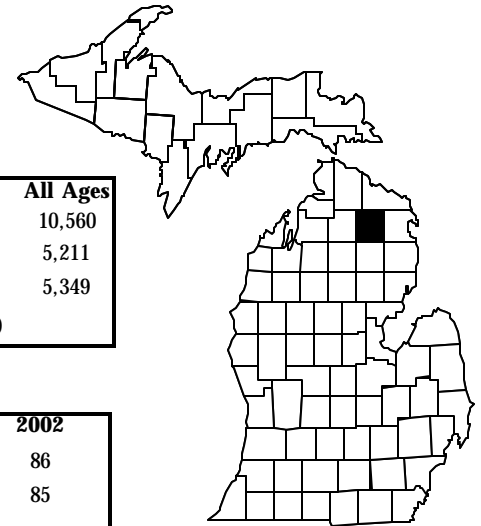
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Montmorency County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	105	485	526	607	693	549	383	486	564	742	768	762	697	781	2,517	10,560
Male	65	218	250	297	371	286	193	254	272	372	363	402	343	354	1,171	5,211
Female	40	162	276	310	322	263	190	232	292	370	405	360	354	427	1,346	5,349
Race(%):	White (98.6)		Black (0.4)		Native American (0.4)		Asian/Pacific Islander (0.1)		Multiple Race (0.5)		Hispanic (0.8)					

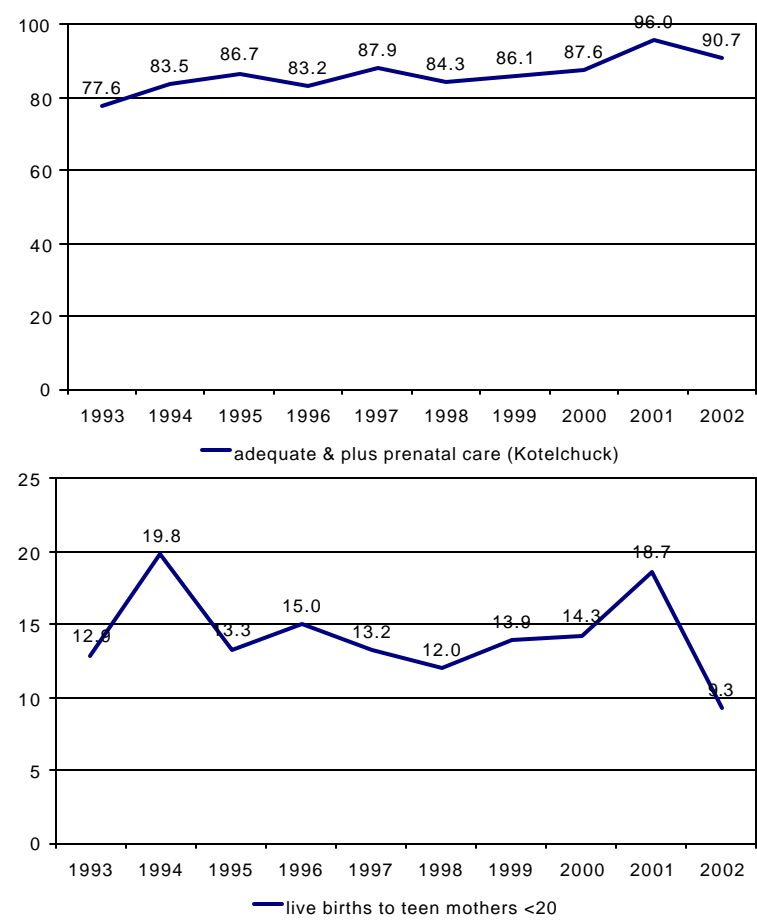
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	85	91	90	107	91	108	79	105	75	86
White	85	90	90	106	90	106	77	101	74	85
Black	---	---	---	---	---	---	---	---	---	---
American Indian	---	---	---	1	1	2	2	4	1	1
Asian & P.I.	---	---	---	---	---	---	---	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	2	---	1	---	0	---	1	---	0	---	1	---	1	---	3	---	2	---
1,500-2,499	0	---	2	---	10	11.1	9	8.4	3	---	5	---	6	7.6	2	---	3	---	8	9.3
Total < 2500	0	---	4	---	11	12.2	9	8.4	4	---	5	---	7	8.9	3	---	6	8.0	10	11.6
Preterm																				
Preterm < 37 weeks	8	9.4	11	12.1	6	6.7	11	10.3	7	7.7	9	8.3	9	11.4	8	7.6	11	14.7	12	14.0
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	66	77.6	76	83.5	78	86.7	89	83.2	80	87.9	91	84.3	68	86.1	92	87.6	72	96.0	78	90.7
Live Births to Teen Mothers																				
< 18	5	---	5	---	3	---	5	---	2	---	8	7.4	1	---	4	---	2	---	2	---
18-19	6	7.1	13	14.3	9	10.0	11	10.3	10	11.0	5	---	10	12.7	11	10.5	12	16.0	6	7.0
Total under 20	11	12.9	18	19.8	12	13.3	16	15.0	12	13.2	13	12.0	11	13.9	15	14.3	14	18.7	8	9.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	1	---
Infant deaths	1	---	1	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Neonatal	0	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Postneonatal	1	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age one to nine	0	---	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---	0	---
Age ten to nineteen	1	---	1	---	0	---	1	---	1	---	1	---	0	---	0	---	1	---	1	---

*If number is less than 6, the rate is not calculated.

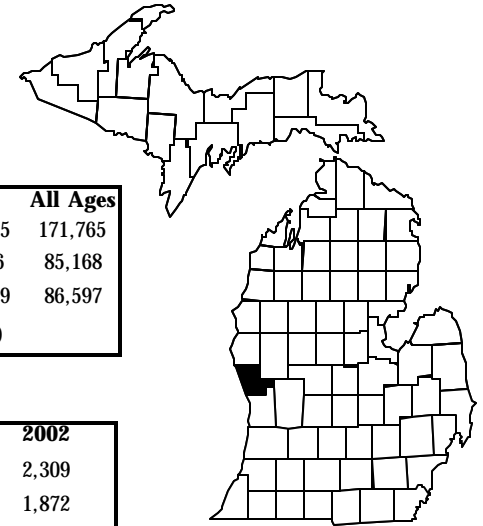
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated..

Muskegon County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	2,224	11,491	12,402	14,002	12,950	11,483	10,126	11,485	12,529	13,794	13,182	11,326	8,605	6,695	21,695	171,765
Male	1,130	4,680	6,352	7,325	6,699	5,793	5,287	5,918	6,507	6,899	6,662	5,604	4,235	3,171	8,906	85,168
Female	1,094	4,587	6,050	6,677	6,251	5,690	4,839	5,567	6,022	6,895	6,520	5,722	4,370	3,524	12,789	86,597
Race(%):	White (82.9)		Black (14.1)		Native American (0.8)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (%)		Hispanic (3.6)					

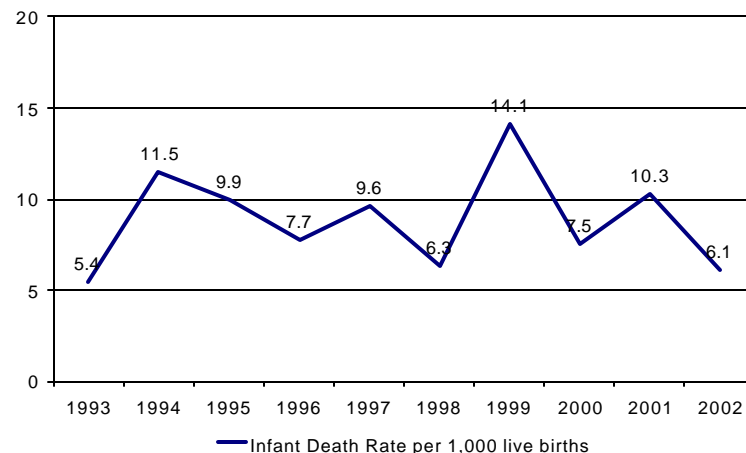
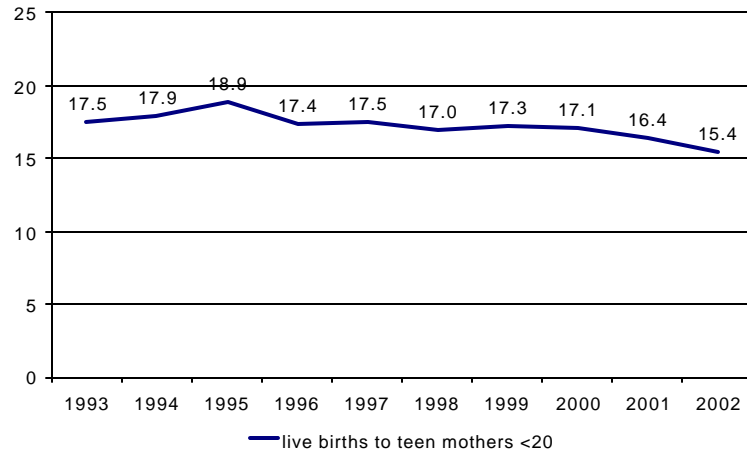
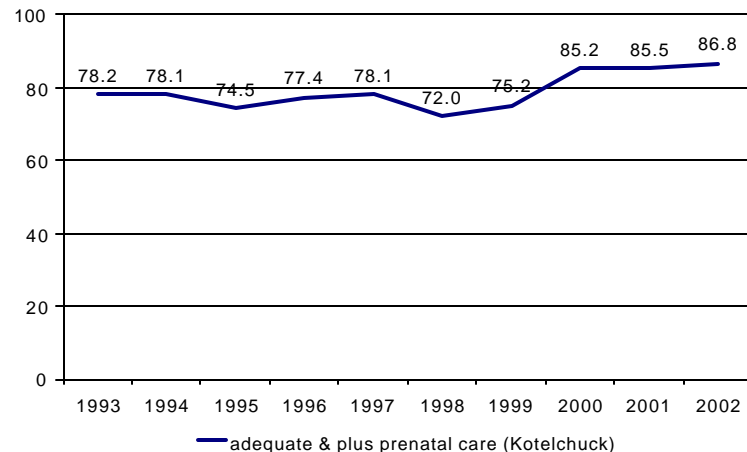
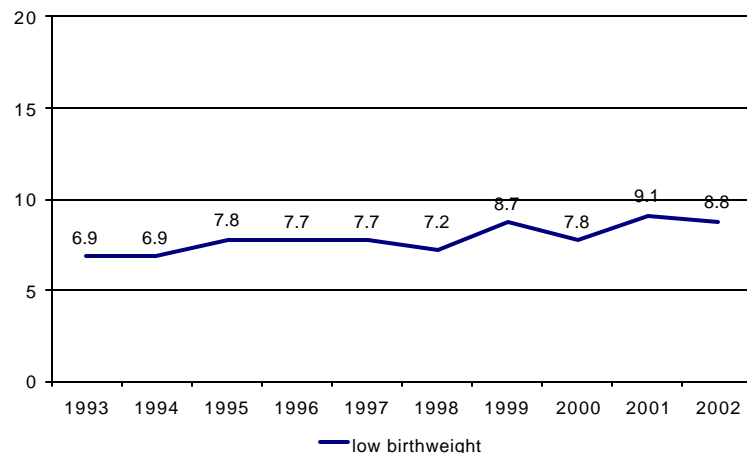
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	2,389	2,355	2,230	2,350	2,385	2,369	2,334	2,391	2,428	2,309
White	1,822	1,864	1,719	1,826	1,870	1,895	1,811	1,913	1,930	1,872
Black	526	447	482	492	480	450	487	429	475	418
American Indian	28	22	20	22	19	7	11	21	6	2
Asian & P.I.	10	16	5	9	14	13	18	25	16	16

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	26	1.1	42	1.8	41	1.8	25	1.1	40	1.7	33	1.4	40	1.7	30	1.3	47	1.9	25	1.1
1,500-2,499	139	5.8	121	5.1	134	6.0	155	6.6	143	6.0	138	5.8	163	7.0	156	6.5	174	7.2	178	7.7
Total < 2500	165	6.9	163	6.9	175	7.8	180	7.7	183	7.7	171	7.2	203	8.7	186	7.8	221	9.1	203	8.8
Preterm																				
Preterm < 37 weeks	284	11.9	261	11.1	239	10.7	256	10.9	259	10.9	222	9.4	222	9.5	243	10.2	288	11.9	331	14.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,868	78.2	1,840	78.1	1,661	74.5	1,818	77.4	1,862	78.1	1,706	72.0	1,756	75.2	2,038	85.2	2,076	85.5	2,004	86.8
Live Births to Teen Mothers																				
< 18	173	7.2	179	7.6	165	7.4	169	7.2	139	5.8	149	6.3	152	6.5	170	7.1	149	6.1	106	4.6
18-19	244	10.2	242	10.3	257	11.5	241	10.3	279	11.7	254	10.7	251	10.8	238	10.0	249	10.3	250	10.8
Total under 20	417	17.5	421	17.9	422	18.9	410	17.4	418	17.5	403	17.0	403	17.3	408	17.1	398	16.4	356	15.4
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	11	---	18	---	16	---	18	---	16	---	15	---	18	---	10	---	11	---	12	---
Infant deaths	13	5.4	27	11.5	22	9.9	18	7.7	23	9.6	15	6.3	33	14.1	18	7.5	25	10.3	14	6.1
Neonatal	4	---	14	5.9	14	6.3	12	5.1	16	6.7	5	---	23	9.9	11	4.6	17	7.0	9	3.9
Postneonatal	9	3.8	13	5.5	8	3.6	6	2.6	7	2.9	10	4.2	10	4.3	7	2.9	8	3.3	5	---
Age one to nine	10	---	10	---	6	---	7	---	6	---	10	---	5	---	2	---	7	---	2	---
Age ten to nineteen	11	---	7	---	12	---	14	---	12	---	17	---	8	---	9	---	12	---	12	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.4	2.1	1.3	Maternal health/prematurity
1500g+	Fetal	1.5	1.1	0.4	Maternal care
	Neonatal	1.4	1.2	0.2	Newborn care
	Postneonatal	2.9	1.0	1.9	Infant health
Total		9.2	5.4	3.8	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

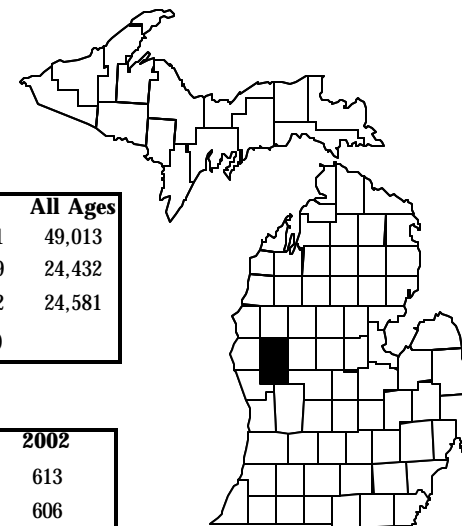
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Newaygo County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	599	3,158	3,554	4,331	3,978	2,938	2,438	2,962	3,539	4,022	3,630	3,198	2,575	2,369	6,321	49,013
Male	285	1,306	1,840	2,214	2,057	1,508	1,244	1,430	1,771	1,982	1,843	1,661	1,283	1,179	2,829	24,432
Female	314	1,253	1,714	2,117	1,921	1,430	1,194	1,532	1,768	2,040	1,787	1,537	1,292	1,190	3,492	24,581
Race(%):	White (96.6)		Black (1.3)		Native American (0.7)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (0.9)		Hispanic (4.2)					

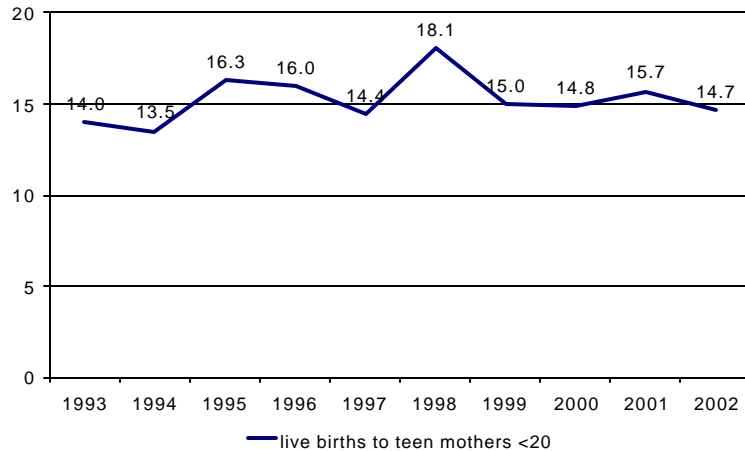
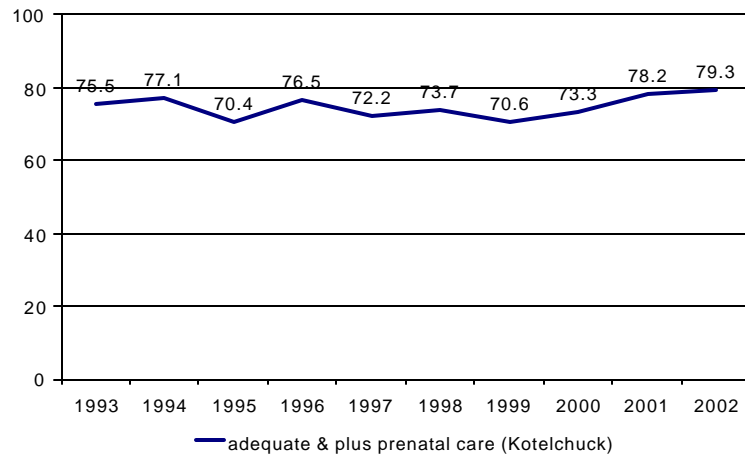
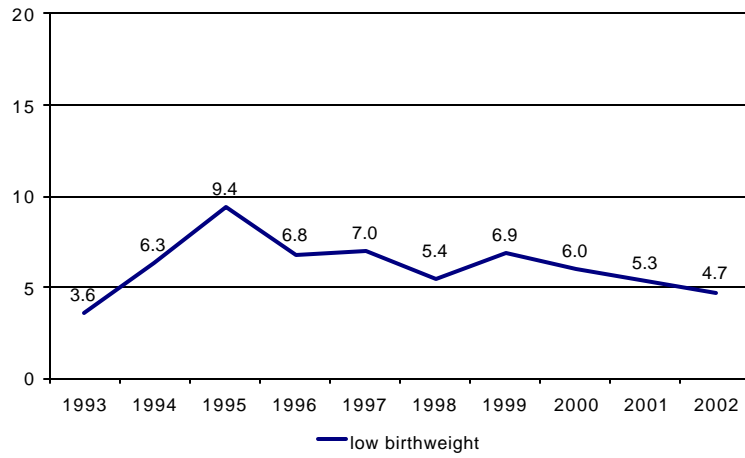
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	613	602	594	637	633	635	635	633	618	613
White	599	596	583	620	618	621	625	614	608	606
Black	8	2	5	12	6	7	4	7	5	4
American Indian	3	---	2	1	6	6	1	9	2	1
Asian & P.I.	3	3	2	4	2	1	4	2	2	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	8	1.3	8	1.3	7	1.1	10	1.6	5	---	9	1.4	6	0.9	7	1.1	7	1.1
1,500-2,499	20	3.3	30	5.0	48	8.1	36	5.7	34	5.4	29	4.6	35	5.5	32	5.1	26	4.2	22	3.6
Total < 2500	22	3.6	38	6.3	56	9.4	43	6.8	44	7.0	34	5.4	44	6.9	38	6.0	33	5.3	29	4.7
Preterm																				
Preterm < 37 weeks	66	10.8	51	8.5	58	9.8	60	9.4	60	9.5	50	7.9	69	10.9	55	8.7	62	10.0	53	8.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	463	75.5	464	77.1	418	70.4	487	76.5	457	72.2	468	73.7	448	70.6	464	73.3	483	78.2	486	79.3
Live Births to Teen Mothers																				
< 18	34	5.5	27	4.5	34	5.7	44	6.9	31	4.9	35	5.5	32	5.0	33	5.2	36	5.8	25	4.1
18-19	52	8.5	54	9.0	63	10.6	58	9.1	60	9.5	80	12.6	63	9.9	61	9.6	61	9.9	65	10.6
Total under 20	86	14.0	81	13.5	97	16.3	102	16.0	91	14.4	115	18.1	95	15.0	94	14.8	97	15.7	90	14.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	4	---	2	---	4	---	7	---	2	---	1	---	2	---	6	---	2	---
Infant deaths	7	11.4	7	11.6	5	---	4	---	3	---	4	---	2	---	5	---	3	---	3	---
Neonatal	5	---	4	---	3	---	2	---	2	---	4	---	1	---	3	---	2	---	3	---
Postneonatal	2	---	3	---	2	---	2	---	1	---	0	---	1	---	2	---	1	---	0	---
Age one to nine	0	---	1	---	2	---	3	---	2	---	1	---	2	---	0	---	0	---	2	---
Age ten to nineteen	7	---	4	---	4	---	3	---	8	---	3	---	4	---	2	---	4	---	6	---

*If number is less than 6, the rate is not calculated.

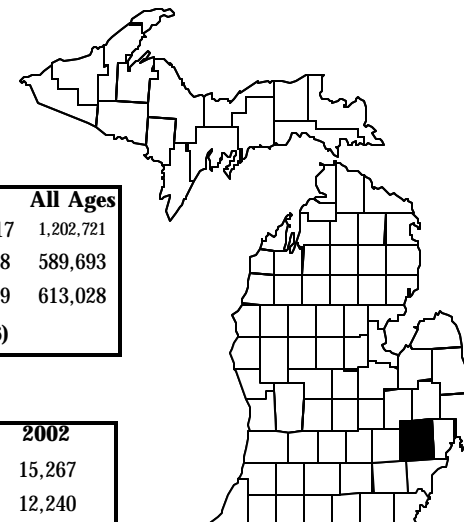
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated..

Oakland County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	15,983	78,952	82,388	87,735	77,013	61,029	70,843	93,506	99,407	106,430	101,011	88,535	70,652	48,403	136,817	1,202,721
Male	8,193	32,316	42,481	45,039	39,695	31,008	35,271	46,633	49,350	52,392	49,261	43,443	34,778	23,815	56,018	589,693
Female	7,790	30,653	39,907	42,696	37,318	30,021	35,572	46,873	50,057	54,038	51,750	45,092	35,874	24,588	80,799	613,028
Race(%):	White (82.7)		Black (10.8)		Native American (0.3)		Asian/Pacific Islander (4.9)		Multiple Ethnicity (2.6)		Hispanic (2.6)					

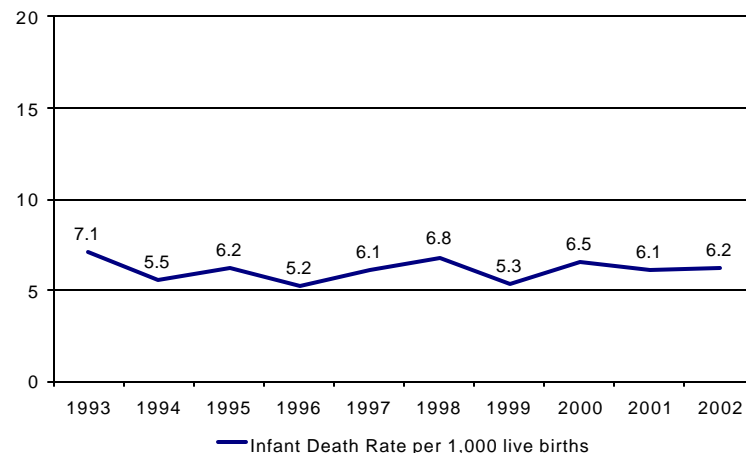
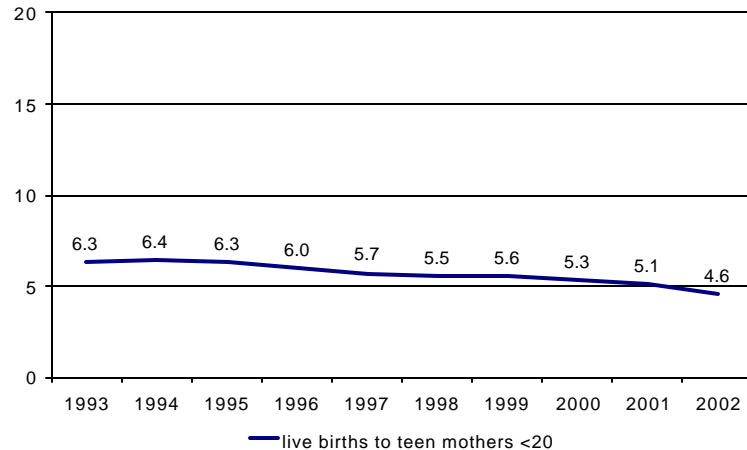
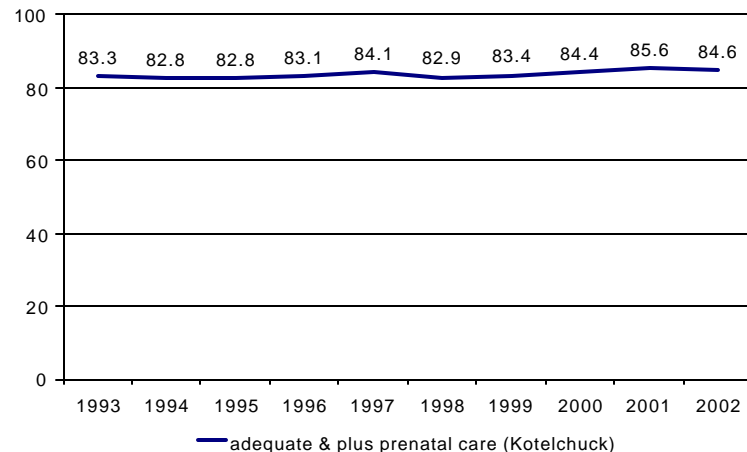
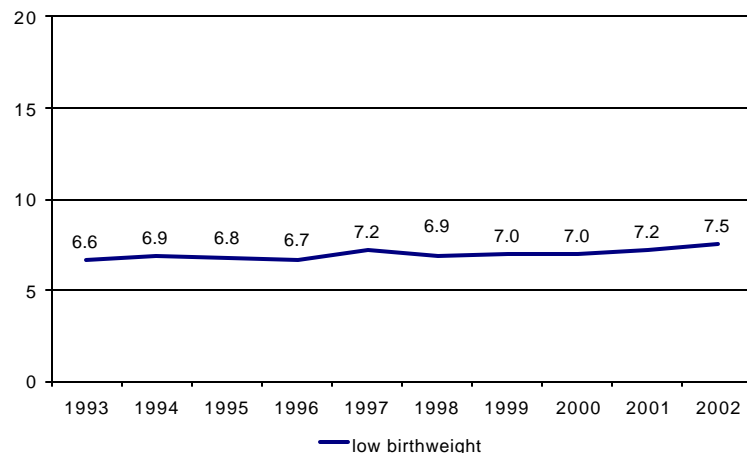
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	16,160	16,277	16,196	16,088	15,992	15,732	16,001	16,253	15,867	15,267
White	14,072	13,991	13,897	13,688	13,512	13,180	13,219	13,136	12,827	12,240
Black	1,543	1,576	1,589	1,636	1,603	1,668	1,782	1,789	1,812	1,742
American Indian	27	50	39	35	34	28	18	31	34	31
Asian & P.I.	287	400	397	435	647	770	813	986	1,044	1,133

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	198	1.2	223	1.4	191	1.2	197	1.2	209	1.3	224	1.4	239	1.5	210	1.3	239	1.5	215	1.4
1,500-2,499	871	5.4	893	5.5	916	5.7	882	5.5	949	5.9	869	5.5	885	5.5	920	5.7	901	5.7	932	6.1
Total < 2500	1,069	6.6	1,116	6.9	1,107	6.8	1,079	6.7	1,158	7.2	1,093	6.9	1,124	7.0	1,130	7.0	1,140	7.2	1,147	7.5
Preterm																				
Preterm < 37 weeks	1,663	10.3	1,654	10.2	1,636	10.1	1,593	9.9	1,616	10.1	1,554	9.9	1,623	10.1	1,695	10.4	1,707	10.8	1,530	10.0
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	13,459	83.3	13,477	82.8	13,418	82.8	13,363	83.1	13,453	84.1	13,048	82.9	13,349	83.4	13,721	84.4	13,575	85.6	12,923	84.6
Live Births to Teen Mothers																				
< 18	351	2.2	371	2.3	362	2.2	369	2.3	289	1.8	292	1.9	295	1.8	268	1.6	216	1.4	197	1.3
18-19	664	4.1	664	4.1	662	4.1	603	3.7	629	3.9	573	3.6	596	3.7	600	3.7	589	3.7	503	3.3
Total under 20	1,015	6.3	1,035	6.4	1,024	6.3	972	6.0	918	5.7	865	5.5	891	5.6	868	5.3	805	5.1	700	4.6
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	81	---	81	---	87	---	82	---	81	---	100	---	111	---	99	---	120	---	107	---
Infant deaths	115	7.1	89	5.5	100	6.2	84	5.2	97	6.1	107	6.8	85	5.3	106	6.5	96	6.1	95	6.2
Neonatal	87	5.4	64	3.9	64	4.0	52	3.2	72	4.5	75	4.8	64	4.0	83	5.1	72	4.5	68	4.5
Postneonatal	28	1.7	25	1.5	36	2.2	32	2.0	25	1.6	32	2.0	21	1.3	23	1.4	24	1.5	27	1.8
Age one to nine	26	---	34	---	31	---	26	---	31	---	23	---	21	---	38	---	24	---	21	---
Age ten to nineteen	54	---	64	---	59	---	51	---	63	---	46	---	47	---	43	---	46	---	48	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		2.9	2.1	0.8	Maternal health/prematurity
1500g+	Fetal	1.9	1.1	0.8	Maternal care
	Neonatal	1.0	1.2	(-0.2)	Newborn care
	Postneonatal	1.4	1.0	0.4	Infant health
Total		7.2	5.4	1.8	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

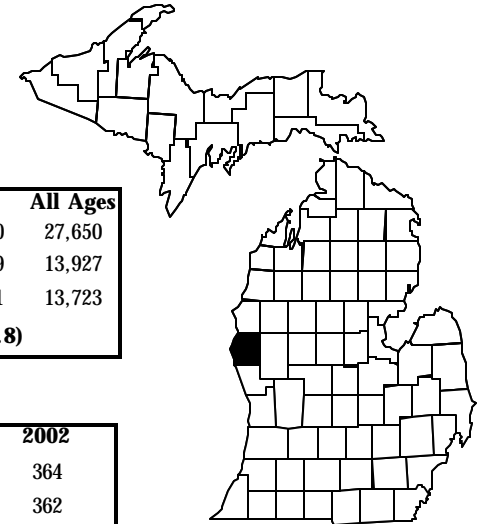
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Oceana County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	321	1,724	1,853	2,282	2,358	1,743	1,458	1,635	1,922	2,211	1,976	1,847	1,502	1,309	3,830	27,650
Male	162	705	994	1,173	1,265	891	739	838	981	1,100	1,007	948	747	648	1,729	13,927
Female	159	698	859	1,109	1,093	852	719	797	941	1,111	969	899	755	661	2,101	13,723
Race(%):	White (97.1)		Black (0.4)		Native American (1.2)		Asian/Pacific Islander (0.4)		Multiple Race (0.9)		Hispanic (12.8)					

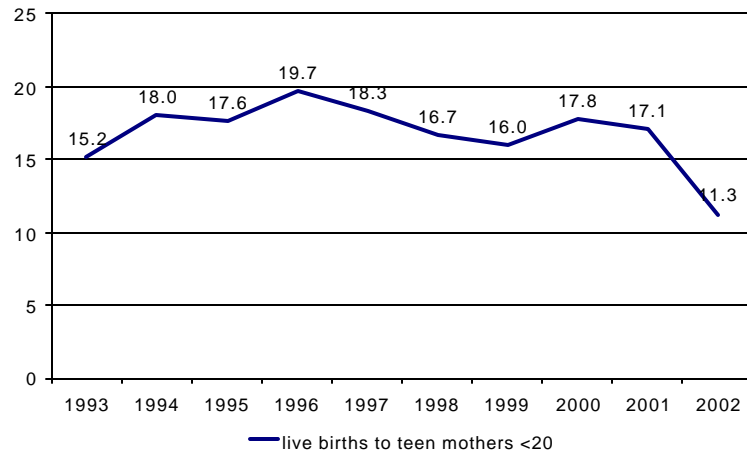
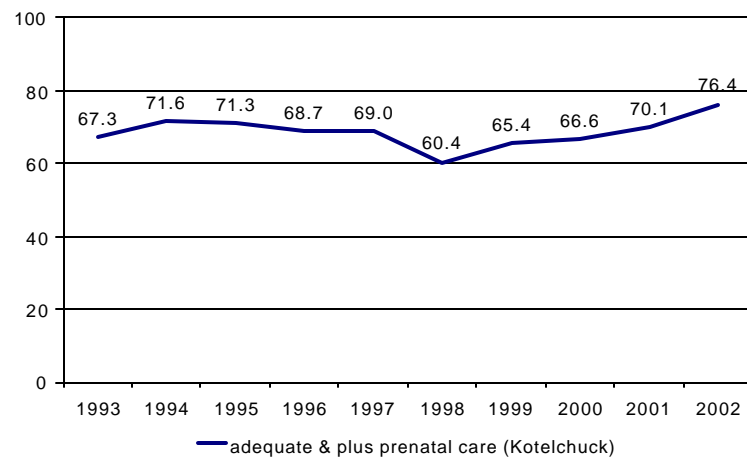
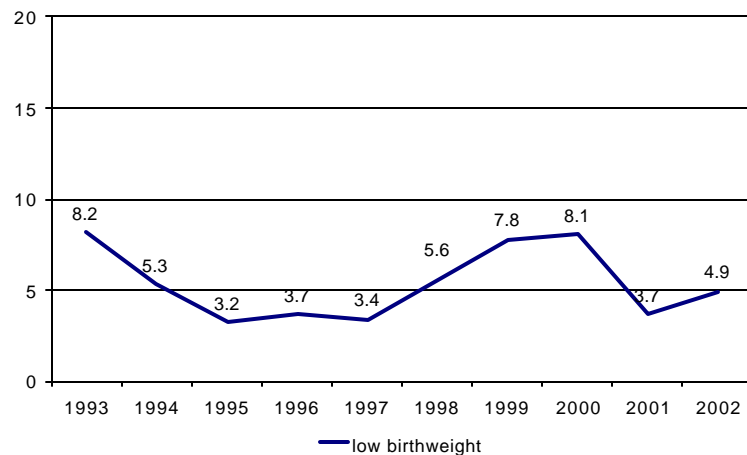
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	343	338	341	355	323	359	344	371	381	364
White	334	325	337	348	320	356	338	364	376	362
Black	---	---	---	2	1	---	---	---	2	---
American Indian	9	12	3	3	1	2	3	2	2	---
Asian & P.I.	---	1	1	1	1	---	2	4	1	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	4	---	2	---	0	---	5	---	2	---	5	---	3	---	8	2.2	6	1.6	7	1.9
1,500-2,499	24	7.0	16	4.7	11	3.2	8	2.3	9	2.8	15	4.2	24	7.0	22	5.9	8	2.1	11	3.0
Total < 2500	28	8.2	18	5.3	11	3.2	13	3.7	11	3.4	20	5.6	27	7.8	30	8.1	14	3.7	18	4.9
Preterm																				
Preterm < 37 weeks	38	11.1	36	10.7	31	9.1	26	7.3	21	6.5	35	9.7	33	9.6	43	11.6	37	9.7	49	13.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	231	67.3	242	71.6	243	71.3	244	68.7	223	69.0	217	60.4	225	65.4	247	66.6	267	70.1	278	76.4
Live Births to Teen Mothers																				
< 18	15	4.4	25	7.4	25	7.3	20	5.6	23	7.1	20	5.6	19	5.5	24	6.5	17	4.5	16	4.4
18-19	37	10.8	36	10.7	35	10.3	50	14.1	36	11.1	40	11.1	36	10.5	42	11.3	48	12.6	25	6.9
Total under 20	52	15.2	61	18.0	60	17.6	70	19.7	59	18.3	60	16.7	55	16.0	66	17.8	65	17.1	41	11.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	4	---	0	---	0	---	3	---	1	---	2	---	4	---	0	---	4	---	0	---
Infant deaths	5	---	2	---	0	---	1	---	1	---	7	19.5	0	---	1	---	3	---	4	---
Neonatal	3	---	2	---	0	---	0	---	0	---	6	16.7	0	---	0	---	1	---	4	---
Postneonatal	2	---	0	---	0	---	1	---	1	---	1	---	0	---	1	---	2	---	0	---
Age one to nine	0	---	1	---	1	---	2	---	3	---	0	---	0	---	1	---	1	---	1	---
Age ten to nineteen	5	---	2	---	4	---	2	---	1	---	0	---	3	---	5	---	3	---	3	---

*If number is less than 6, the rate is not calculated.

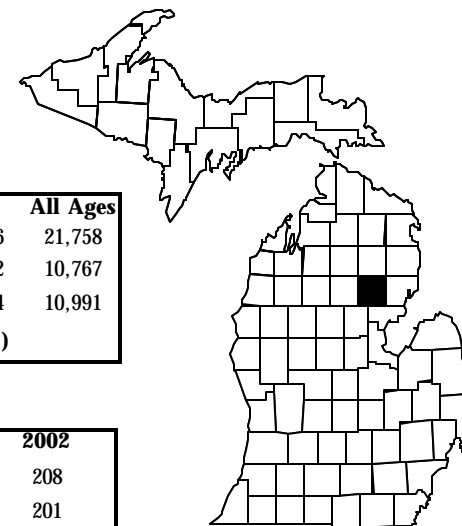
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Ogemaw County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	230	1,093	1,289	1,532	1,519	1,191	944	1,099	1,397	1,611	1,629	1,433	1,432	1,363	4,226	21,758
Male	116	431	635	817	817	611	463	549	673	808	828	696	702	669	1,952	10,767
Female	114	432	654	715	702	580	481	550	724	803	801	737	730	694	2,274	10,991
Race(%):	White (97.6)		Black (0.3)		Native American (0.6)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (0.3)		Ethnicity(%):		Hispanic (1.1)			

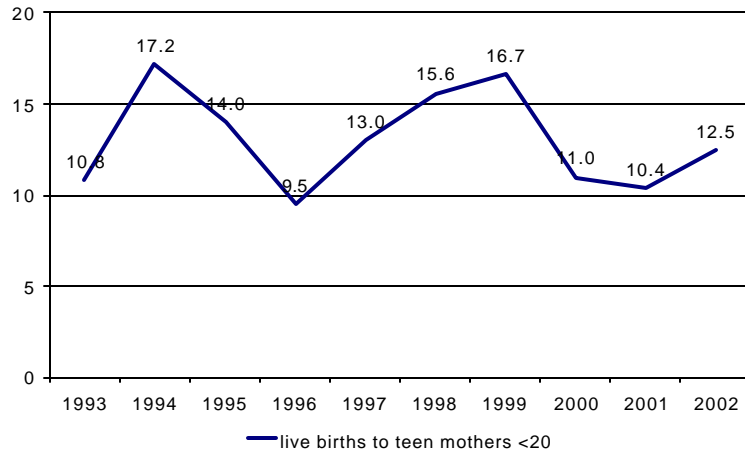
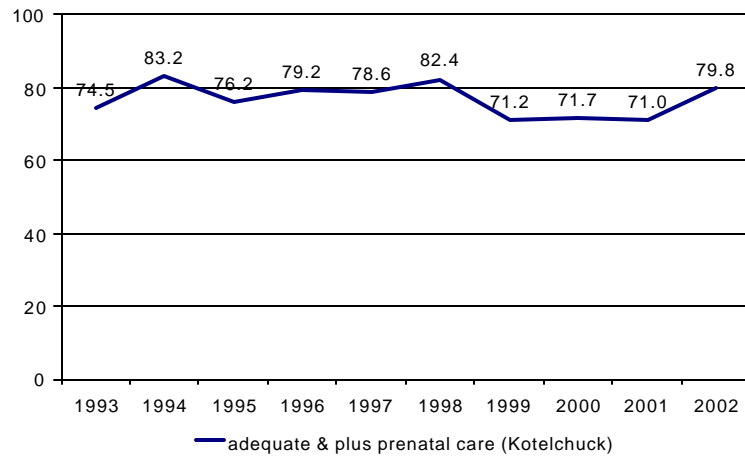
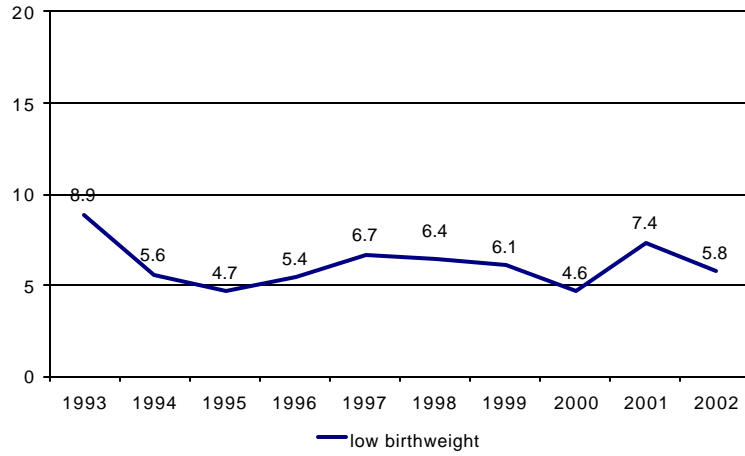
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	259	250	235	221	238	250	198	237	231	208
White	252	247	231	217	233	247	195	235	227	201
Black	---	---	---	1	---	---	1	---	---	1
American Indian	5	3	4	---	3	1	1	---	1	1
Asian & P.I.	2	---	---	2	2	---	1	2	3	5

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	9	3.5	2	---	3	---	3	---	5	---	6	2.4	0	---	2	---	3	---	2	---
1,500-2,499	14	5.4	12	4.8	8	3.4	9	4.1	11	4.6	10	4.0	12	6.1	9	3.8	14	6.1	10	4.8
Total < 2500	23	8.9	14	5.6	11	4.7	12	5.4	16	6.7	16	6.4	12	6.1	11	4.6	17	7.4	12	5.8
Preterm																				
Preterm < 37 weeks	39	15.1	27	10.8	22	9.4	15	6.8	17	7.1	25	10.0	14	7.1	18	7.6	26	11.3	24	11.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	193	74.5	208	83.2	179	76.2	175	79.2	187	78.6	206	82.4	141	71.2	170	71.7	164	71.0	166	79.8
Live Births to Teen Mothers																				
< 18	7	2.7	13	5.2	12	5.1	9	4.1	8	3.4	9	3.6	9	4.5	9	3.8	6	2.6	6	2.9
18-19	21	8.1	30	12.0	21	8.9	12	5.4	23	9.7	30	12.0	24	12.1	17	7.2	18	7.8	20	9.6
Total under 20	28	10.8	43	17.2	33	14.0	21	9.5	31	13.0	39	15.6	33	16.7	26	11.0	24	10.4	26	12.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	0	---	0	---	1	---	0	---	0	---	1	---	1	---	3	---	1	---
Infant deaths	0	---	2	---	3	---	2	---	1	---	3	---	1	---	1	---	1	---	0	---
Neonatal	0	---	2	---	2	---	2	---	1	---	3	---	0	---	1	---	1	---	0	---
Postneonatal	0	---	0	---	1	---	0	---	0	---	0	---	1	---	0	---	0	---	0	---
Age one to nine	0	---	0	---	1	---	2	---	0	---	2	---	0	---	2	---	0	---	0	---
Age ten to nineteen	4	---	2	---	3	---	4	---	2	---	4	---	1	---	2	---	1	---	3	---

*If number is less than 6, the rate is not calculated.

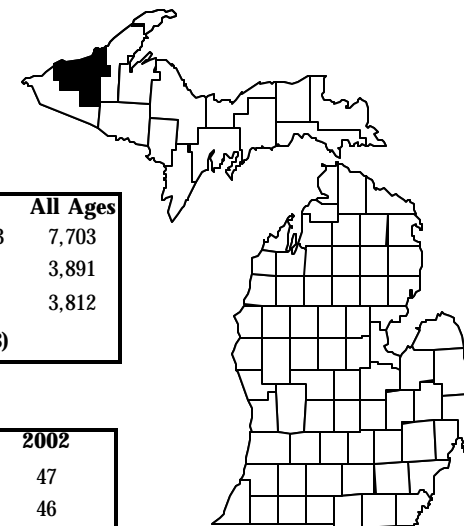
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Ontonagon County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	40	284	361	463	514	306	296	372	465	589	632	608	547	533	1,733	7,703
Male	25	135	182	235	272	176	141	195	244	311	323	333	277	270	772	3,891
Female	15	109	179	228	242	130	155	177	221	278	309	275	270	263	961	3,812
Race(%):	White (97.7)		Black (0.3)		Native American (1.0)		Asian/Pacific Islander (0.2)		Multiple Race (0.9)		Hispanic (0.8)					

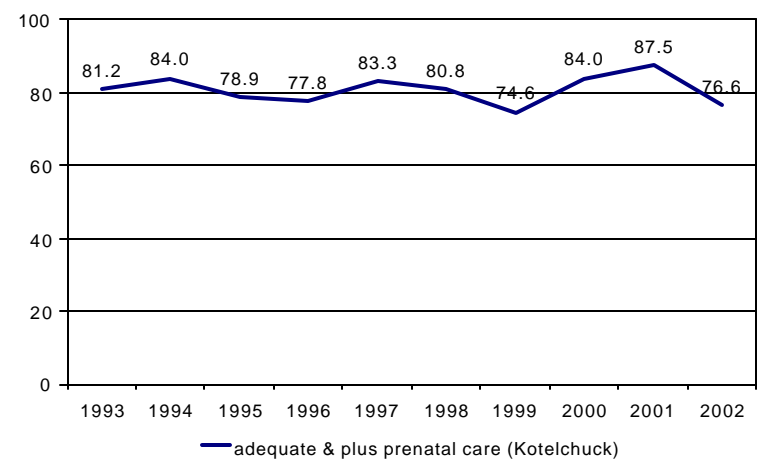
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	85	75	76	72	66	52	71	50	48	47
White	83	72	72	72	64	49	71	49	47	46
Black	---	---	---	---	---	1	---	---	---	---
American Indian	1	3	4	---	2	1	---	1	1	---
Asian & P.I.	1	---	---	---	---	1	---	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	0	---	1	---	0	---	1	---	0	---	0	---	0	---	0	---	1	---
1,500-2,499	6	7.1	1	---	1	---	2	---	3	---	3	---	1	---	3	---	2	---	4	---
Total < 2500	7	8.2	1	---	2	---	2	---	4	---	3	---	1	---	3	---	2	---	5	---
Preterm																				
Preterm < 37 weeks	4	---	7	9.3	6	7.9	7	9.7	7	10.6	2	---	5	---	9	18.0	2	---	7	14.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	69	81.2	63	84.0	60	78.9	56	77.8	55	83.3	42	80.8	53	74.6	42	84.0	42	87.5	36	76.6
Live Births to Teen Mothers																				
< 18	4	---	2	---	2	---	4	---	2	---	3	---	2	---	1	---	0	---	1	---
18-19	8	9.4	2	---	7	9.2	7	9.7	6	9.1	1	---	6	8.5	6	12.0	0	---	1	---
Total under 20	12	14.1	4	---	9	11.8	11	15.3	8	12.1	4	---	8	11.3	7	14.0	0	---	2	---
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	0	---	0	---	0	---	1	---	0	---	1	---	0	---	0	---	0	---
Infant deaths	1	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Neonatal	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Postneonatal	1	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age one to nine	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	1	---	1	---	0	---	1	---	0	---	1	---	0	---	0	---	0	---	1	---

*If number is less than 6, the rate is not calculated.

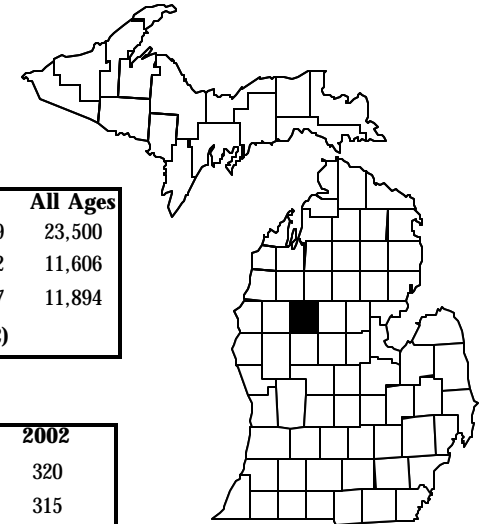
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Osceola County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	239	1,367	1,524	1,908	1,875	1,532	1,189	1,393	1,601	1,878	1,701	1,577	1,315	1,231	3,409	23,500
Male	128	552	769	1,010	983	749	613	707	794	895	843	759	635	607	1,562	11,606
Female	111	576	755	898	892	783	576	686	807	983	858	818	680	624	1,847	11,894
Race(%):	White (97.8)		Black (0.5)		Native American (0.5)		Asian/Pacific Islander (0.2)		Multiple Ethnicity (1.0)		City(%):		Hispanic (1.2)			

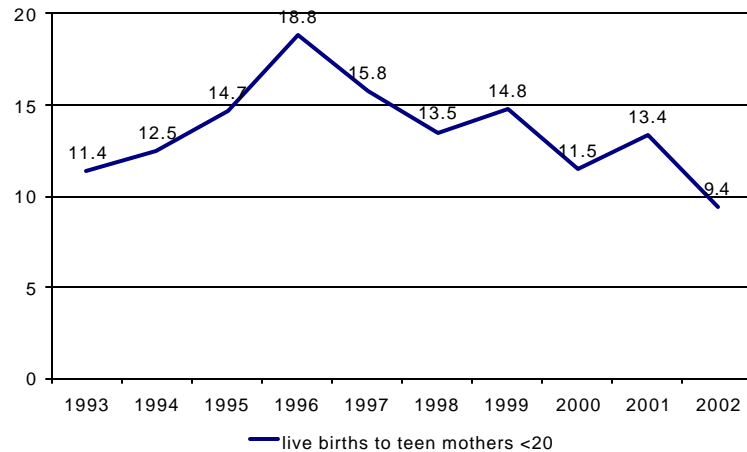
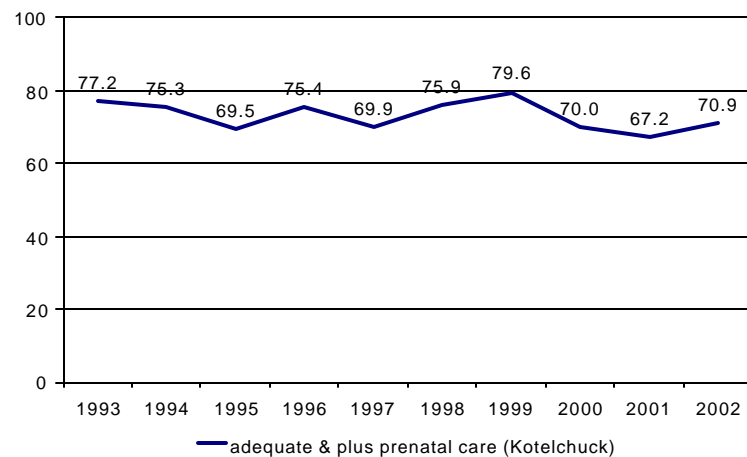
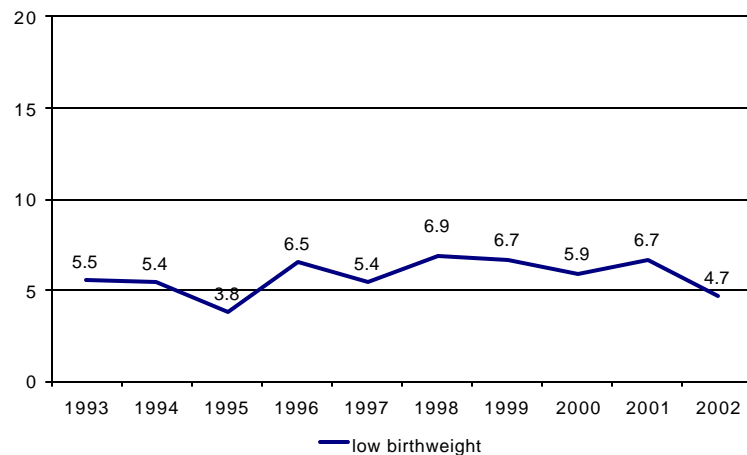
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	290	279	266	276	279	274	284	287	299	320
White	288	279	262	275	273	268	280	283	293	315
Black	---	---	---	---	---	1	---	2	1	1
American Indian	2	---	3	1	3	1	2	1	2	3
Asian & P.I.	---	---	---	---	3	3	2	1	3	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	6	2.1	2	---	2	---	5	---	1	---	6	2.2	3	---	3	---	4	---	6	1.9
1,500-2,499	10	3.4	13	4.7	8	3.0	13	4.7	14	5.0	13	4.7	16	5.6	14	4.9	16	5.4	9	2.8
Total < 2500	16	5.5	15	5.4	10	3.8	18	6.5	15	5.4	19	6.9	19	6.7	17	5.9	20	6.7	15	4.7
Preterm																				
Preterm < 37 weeks	20	6.9	20	7.2	18	6.8	32	11.6	18	6.5	22	8.0	20	7.0	25	8.7	17	5.7	28	8.8
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	224	77.2	210	75.3	185	69.5	208	75.4	195	69.9	208	75.9	226	79.6	201	70.0	201	67.2	227	70.9
Live Births to Teen Mothers																				
< 18	10	3.4	15	5.4	11	4.1	19	6.9	16	5.7	14	5.1	13	4.6	8	2.8	13	4.3	9	2.8
18-19	23	7.9	20	7.2	28	10.5	33	12.0	28	10.0	23	8.4	29	10.2	25	8.7	27	9.0	21	6.6
Total under 20	33	11.4	35	12.5	39	14.7	52	18.8	44	15.8	37	13.5	42	14.8	33	11.5	40	13.4	30	9.4
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	2	---	2	---	1	---	2	---	1	---	1	---	3	---	0	---	5	---
Infant deaths	1	---	0	---	2	---	2	---	0	---	4	---	3	---	3	---	3	---	2	---
Neonatal	0	---	0	---	1	---	2	---	0	---	3	---	2	---	2	---	1	---	2	---
Postneonatal	1	---	0	---	1	---	0	---	0	---	1	---	1	---	1	---	2	---	0	---
Age one to nine	0	---	1	---	0	---	1	---	3	---	2	---	1	---	3	---	2	---	0	---
Age ten to nineteen	1	---	1	---	0	---	1	---	2	---	4	---	3	---	1	---	3	---	2	---

*If number is less than 6, the rate is not calculated.

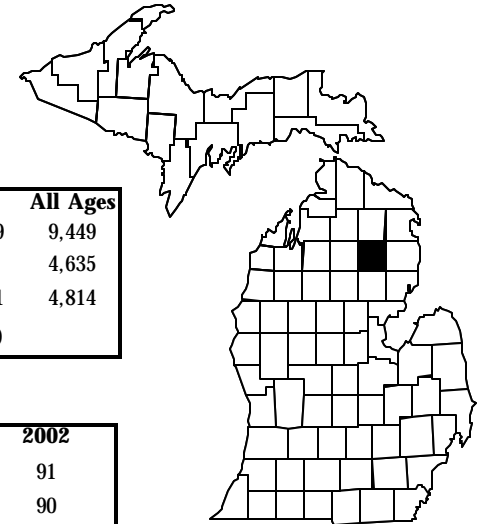
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Oscoda County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	98	465	557	640	684	455	326	462	559	689	721	617	653	682	1,939	9,449
Male	56	194	275	312	351	214	166	237	260	333	342	296	323	338	938	4,635
Female	42	173	282	328	333	241	160	225	299	356	379	321	330	344	1,001	4,814
Race(%):	White (98.4)		Black (0.2)		Native American (0.7)		Asian/Pacific Islander (0.0)		Multiple Race (0.6)		Hispanic (1.0)					

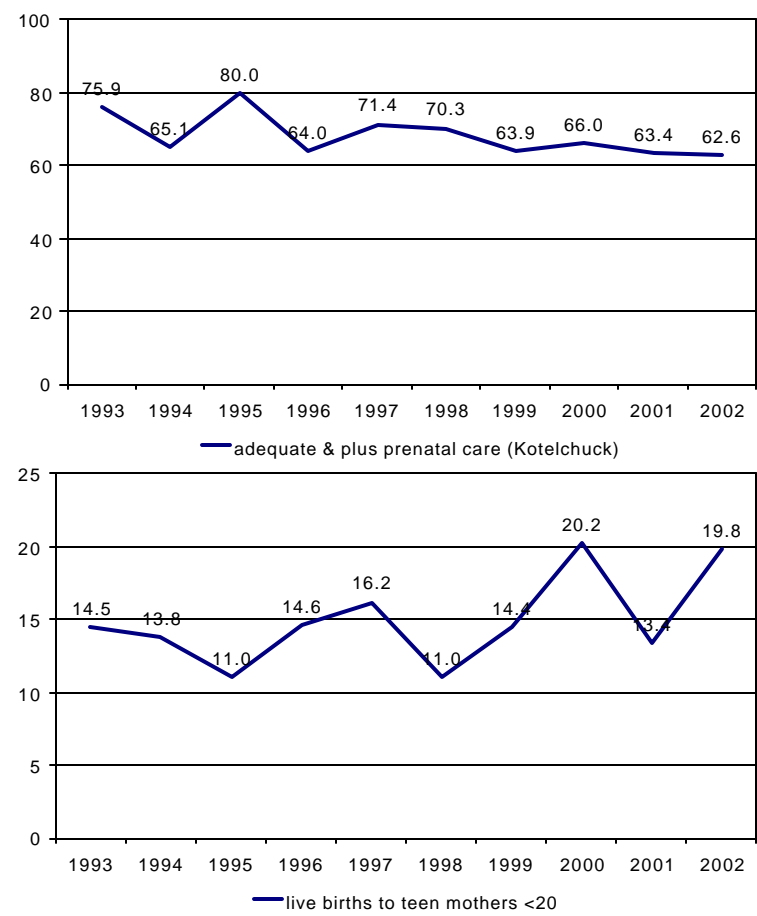
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	83	109	100	89	105	91	97	94	82	91
White	81	105	97	87	103	88	96	93	82	90
Black	---	1	---	---	---	---	---	---	---	---
American Indian	1	2	2	1	---	3	1	1	---	---
Asian & P.I.	---	1	1	1	2	---	---	---	---	1

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	1	---	3	---	0	---	1	---	0	---	1	---	2	---	0	---	2	---
1,500-2,499	4	---	6	5.5	9	9.0	5	---	7	6.7	3	---	1	---	2	---	7	8.5	3	---
Total < 2500	5	---	7	6.4	12	12.0	5	---	8	7.6	3	---	2	---	4	---	7	8.5	5	---
Preterm																				
Preterm < 37 weeks	8	9.6	12	11.0	17	17.0	5	---	7	6.7	11	12.1	9	9.3	5	---	9	11.0	12	13.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	63	75.9	71	65.1	80	80.0	57	64.0	75	71.4	64	70.3	62	63.9	62	66.0	52	63.4	57	62.6
Live Births to Teen Mothers																				
< 18	4	---	4	---	5	---	9	10.1	8	7.6	5	---	7	7.2	4	---	3	---	5	---
18-19	8	9.6	11	10.1	6	6.0	4	---	9	8.6	5	---	7	7.2	15	16.0	8	9.8	13	14.3
Total under 20	12	14.5	15	13.8	11	11.0	13	14.6	17	16.2	10	11.0	14	14.4	19	20.2	11	13.4	18	19.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	2	---	0	---	1	---	0	---	1	---	1	---	0	---	0	---	1	---
Infant deaths	1	---	1	---	2	---	0	---	1	---	0	---	0	---	2	---	0	---	1	---
Neonatal	1	---	0	---	2	---	0	---	0	---	0	---	0	---	2	---	0	---	1	---
Postneonatal	0	---	1	---	0	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---
Age one to nine	0	---	2	---	1	---	0	---	0	---	1	---	0	---	1	---	1	---	0	---
Age ten to nineteen	1	---	0	---	1	---	1	---	0	---	3	---	1	---	2	---	0	---	3	---

*If number is less than 6, the rate is not calculated.

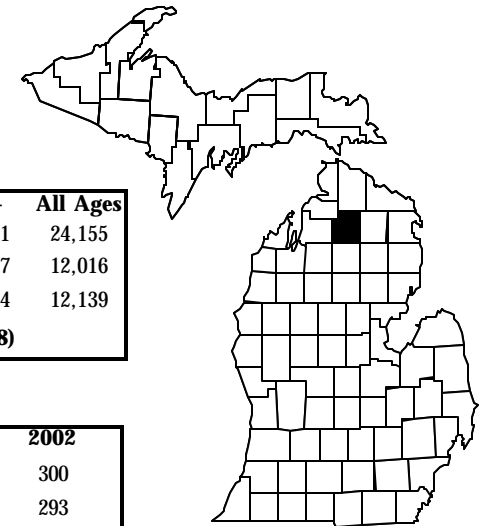
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Otsego County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	328	1,471	1,651	1,878	1,822	1,373	1,250	1,515	1,879	2,023	1,815	1,592	1,327	1,158	3,401	24,155
Male	164	594	827	956	939	683	617	783	922	1,002	919	790	654	579	1,587	12,016
Female	164	549	824	922	883	690	633	732	957	1,021	896	802	673	579	1,814	12,139
Race(%):	White (97.9)		Black (0.3)		Native American (0.6)		Asian/Pacific Islander (0.4)		Multiple Race (0.9)		Hispanic (0.8)					

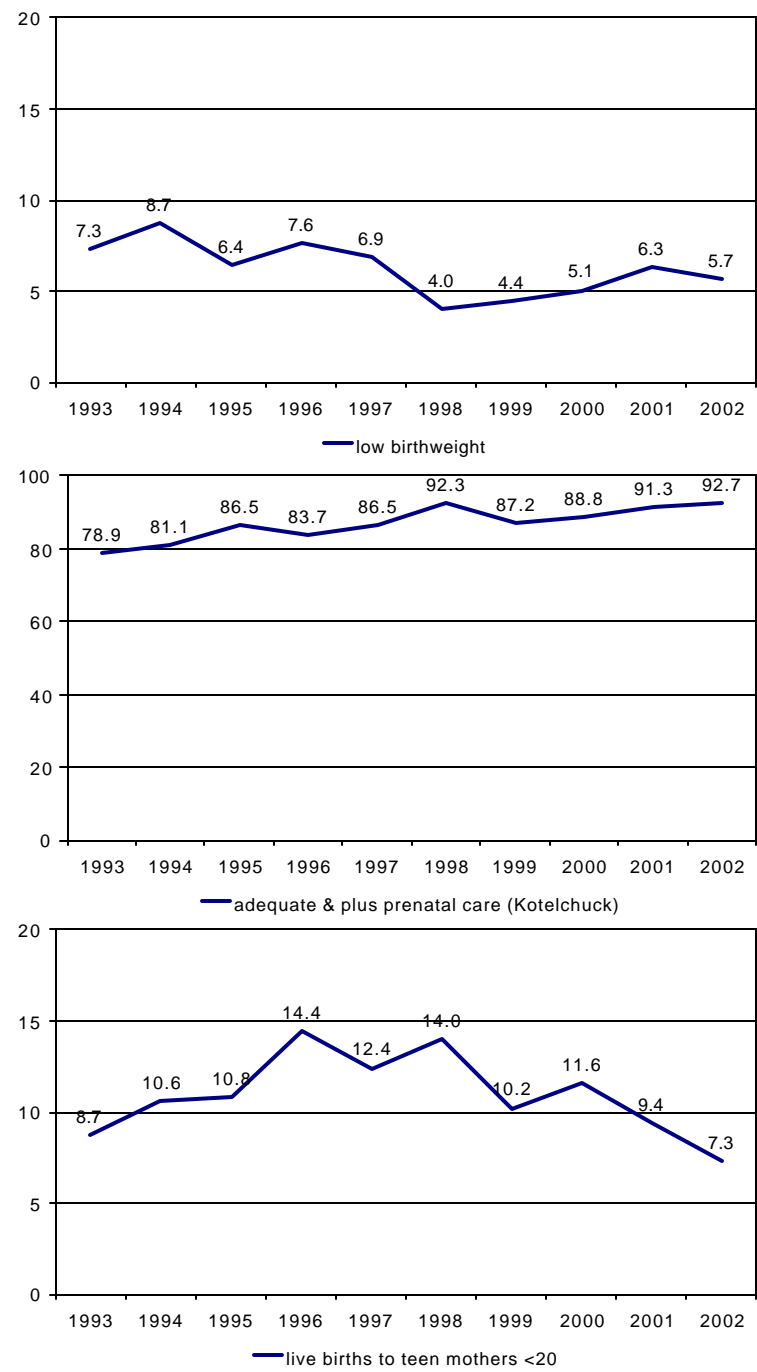
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	289	264	251	263	275	300	274	277	287	300
White	282	261	248	261	272	295	268	275	282	293
Black	1	---	1	1	---	1	---	---	---	---
American Indian	4	2	1	1	2	1	2	1	2	2
Asian & P.I.	2	1	1	---	---	3	4	1	2	5

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	6	2.3	2	---	6	2.3	3	---	3	---	4	---	4	---	2	---	0	---
1,500-2,499	19	6.6	17	6.4	14	5.6	14	5.3	16	5.8	9	3.0	8	2.9	10	3.6	16	5.6	17	5.7
Total < 2500	21	7.3	23	8.7	16	6.4	20	7.6	19	6.9	12	4.0	12	4.4	14	5.1	18	6.3	17	5.7
Preterm																				
Preterm < 37 weeks	29	10.0	31	11.7	16	6.4	32	12.2	17	6.2	29	9.7	19	6.9	14	5.1	31	10.8	26	8.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	228	78.9	214	81.1	217	86.5	220	83.7	238	86.5	277	92.3	239	87.2	246	88.8	262	91.3	278	92.7
Live Births to Teen Mothers																				
< 18	7	2.4	6	2.3	10	4.0	6	2.3	11	4.0	10	3.3	6	2.2	7	2.5	9	3.1	5	---
18-19	18	6.2	22	8.3	17	6.8	32	12.2	23	8.4	32	10.7	22	8.0	25	9.0	18	6.3	17	5.7
Total under 20	25	8.7	28	10.6	27	10.8	38	14.4	34	12.4	42	14.0	28	10.2	32	11.6	27	9.4	22	7.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	1	---	0	---	2	---	1	---	3	---	2	---	5	---	1	---	1	---
Infant deaths	1	---	2	---	1	---	5	---	2	---	1	---	1	---	0	---	0	---	1	---
Neonatal	0	---	2	---	0	---	5	---	1	---	0	---	1	---	0	---	0	---	0	---
Postneonatal	1	---	0	---	1	---	0	---	1	---	1	---	0	---	0	---	0	---	1	---
Age one to nine	0	---	0	---	0	---	0	---	1	---	0	---	2	---	1	---	2	---	1	---
Age ten to nineteen	1	---	1	---	2	---	2	---	2	---	3	---	1	---	5	---	1	---	2	---

*If number is less than 6, the rate is not calculated.

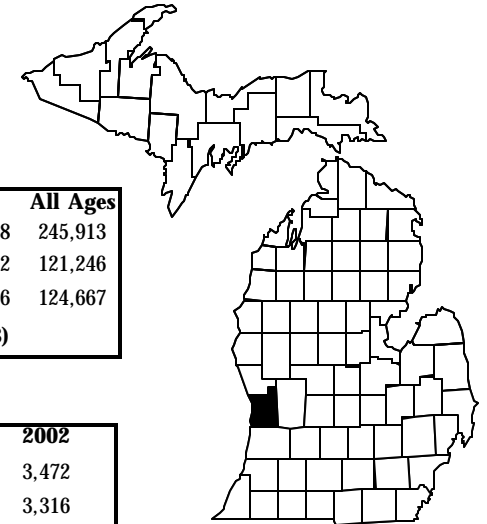
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Ottawa County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	3,551	17,974	18,572	19,925	21,246	20,792	15,138	16,699	18,767	19,338	17,594	14,857	11,233	8,640	25,138	245,913
Male	1,833	7,348	9,506	10,143	10,485	10,021	7,784	8,412	9,400	9,750	8,808	7,393	5,565	4,306	10,492	121,246
Female	1,718	7,075	9,066	9,782	10,761	10,771	7,354	8,287	9,367	9,588	8,786	7,464	5,668	4,334	14,646	124,667
Race(%):	White (95.0)		Black (1.2)		Native American (0.4)		Asian/Pacific Islander (2.3)		Multiple Ethnicity(%):		Hispanic (7.3)					

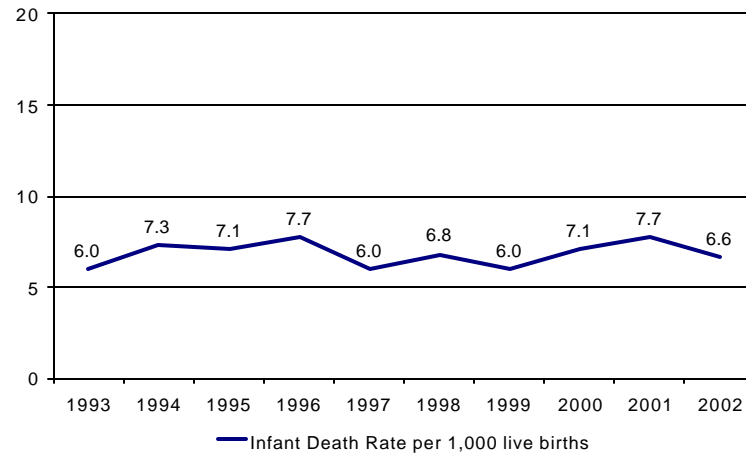
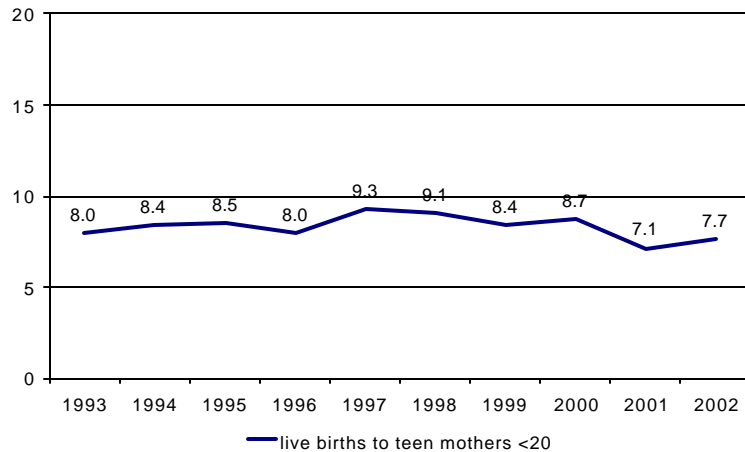
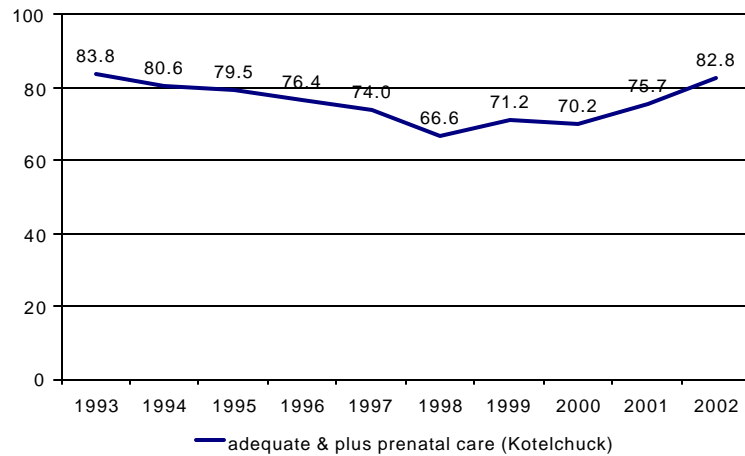
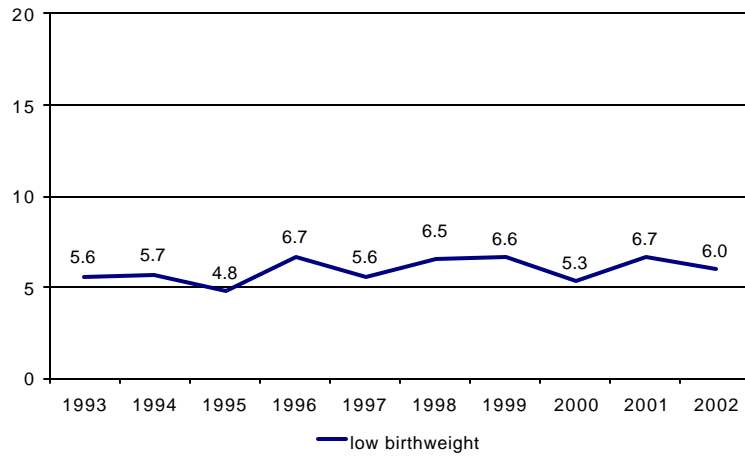
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	3,152	3,130	3,239	3,367	3,356	3,541	3,658	3,669	3,630	3,472
White	3,061	3,035	3,107	3,258	3,225	3,371	3,469	3,450	3,443	3,316
Black	15	19	33	26	34	35	29	45	32	38
American Indian	9	9	20	13	16	20	12	14	11	11
Asian & P.I.	66	66	76	69	78	106	138	136	144	101

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	31	1.0	41	1.3	21	0.6	45	1.3	30	0.9	39	1.1	66	1.8	38	1.0	40	1.1	44	1.3
1,500-2,499	145	4.6	137	4.4	133	4.1	180	5.3	159	4.7	190	5.4	174	4.8	158	4.3	202	5.6	163	4.7
Total < 2500	176	5.6	178	5.7	154	4.8	225	6.7	189	5.6	229	6.5	240	6.6	196	5.3	242	6.7	207	6.0
Preterm																				
Preterm < 37 weeks	246	7.8	252	8.1	280	8.6	337	10.0	289	8.6	348	9.8	308	8.4	287	7.8	336	9.3	332	9.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	2,642	83.8	2,524	80.6	2,575	79.5	2,573	76.4	2,482	74.0	2,357	66.6	2,606	71.2	2,574	70.2	2,748	75.7	2,874	82.8
Live Births to Teen Mothers																				
< 18	96	3.0	100	3.2	86	2.7	107	3.2	117	3.5	102	2.9	94	2.6	120	3.3	90	2.5	91	2.6
18-19	155	4.9	164	5.2	190	5.9	164	4.9	195	5.8	220	6.2	214	5.9	201	5.5	169	4.7	175	5.0
Total under 20	251	8.0	264	8.4	276	8.5	271	8.0	312	9.3	322	9.1	308	8.4	321	8.7	259	7.1	266	7.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	13	---	7	---	14	---	14	---	12	---	11	---	21	---	16	---	18	---	11	---
Infant deaths	19	6.0	23	7.3	23	7.1	26	7.7	20	6.0	24	6.8	22	6.0	26	7.1	28	7.7	23	6.6
Neonatal	12	3.8	17	5.4	13	4.0	23	6.8	17	5.1	15	4.2	18	4.9	18	4.9	16	4.4	21	6.0
Postneonatal	7	2.2	6	1.9	10	3.1	3	---	3	---	9	2.5	4	---	8	2.2	12	3.3	2	---
Age one to nine	6	---	9	---	9	---	5	---	6	---	9	---	4	---	6	---	9	---	10	---
Age ten to nineteen	16	---	10	---	11	---	8	---	6	---	14	---	14	---	14	---	20	---	14	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		2.5	2.1	0.4	Maternal health/prematurity
1500g+	Fetal	1.3	1.1	0.2	Maternal care
	Neonatal	1.7	1.2	0.5	Newborn care
	Postneonatal	1.6	1.0	0.6	Infant health
Total		7.1	5.4	1.7	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

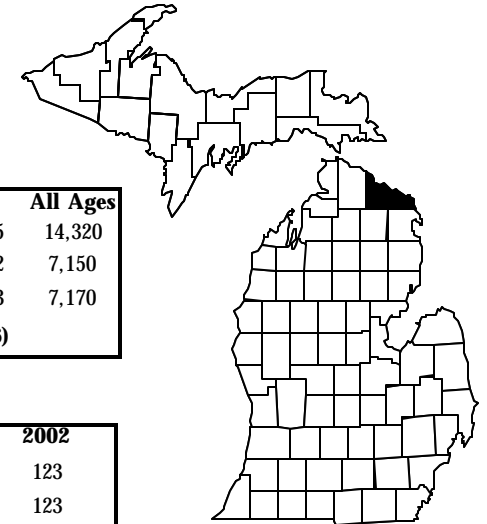
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Presque Isle County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	122	641	732	874	941	784	582	660	822	1,037	1,121	1,077	868	916	3,265	14,320
Male	67	259	358	464	512	404	304	323	429	499	585	545	440	469	1,492	7,150
Female	55	260	374	410	429	380	278	337	393	538	536	532	428	447	1,773	7,170
Race(%):	White (98.3)		Black (0.5)		Native American (0.5)		Asian/Pacific Islander (0.2)		Multiple Race (0.5)		Hispanic (0.6)					

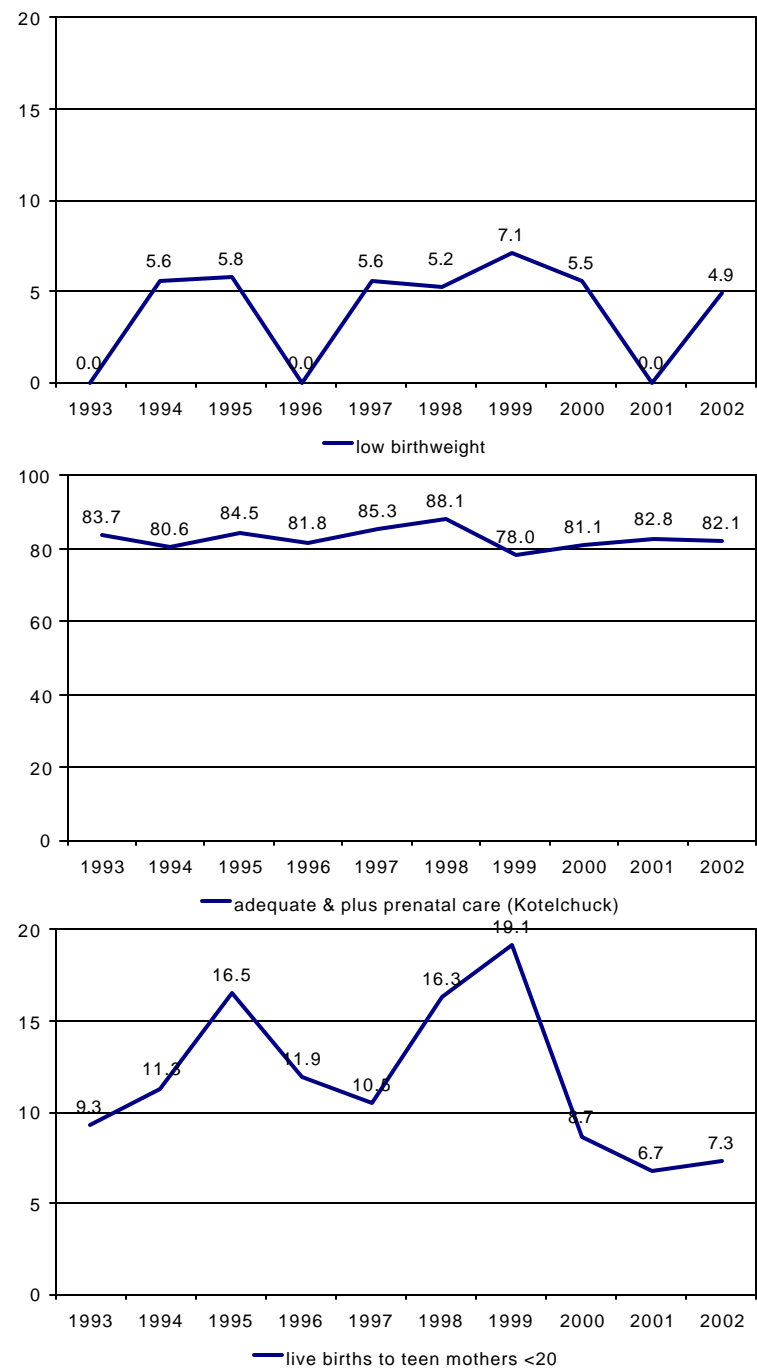
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	129	124	103	143	143	135	141	127	134	123
White	128	122	99	140	140	131	139	125	133	123
Black	---	1	---	---	---	---	1	1	---	---
American Indian	1	---	4	2	2	3	---	1	1	---
Asian & P.I.	---	1	---	1	1	1	1	---	---	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	1	---	1	---	4	---	0	---	0	---	1	---	5	---	1	---	2	---	2	---
1,500-2,499	2	---	6	4.8	2	---	5	---	8	5.6	6	4.4	5	---	6	4.7	3	---	4	---
Total < 2500	3	---	7	5.6	6	5.8	5	---	8	5.6	7	5.2	10	7.1	7	5.5	5	---	6	4.9
Preterm																				
Preterm < 37 weeks	6	4.7	6	4.8	13	12.6	11	7.7	9	6.3	14	10.4	16	11.3	10	7.9	12	9.0	20	16.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	108	83.7	100	80.6	87	84.5	117	81.8	122	85.3	119	88.1	110	78.0	103	81.1	111	82.8	101	82.1
Live Births to Teen Mothers																				
< 18	3	---	5	---	5	---	5	---	3	---	7	5.2	9	6.4	3	---	2	---	4	---
18-19	9	7.0	9	7.3	12	11.7	12	8.4	12	8.4	15	11.1	18	12.8	8	6.3	7	5.2	5	---
Total under 20	12	9.3	14	11.3	17	16.5	17	11.9	15	10.5	22	16.3	27	19.1	11	8.7	9	6.7	9	7.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	1	---	2	---	1	---	2	---	0	---	0	---	0	---	2	---	2	---
Infant deaths	1	---	0	---	6	58.3	0	---	0	---	2	---	3	---	2	---	3	---	1	---
Neonatal	1	---	0	---	5	---	0	---	0	---	1	---	3	---	1	---	1	---	1	---
Postneonatal	0	---	0	---	1	---	0	---	0	---	1	---	0	---	1	---	2	---	0	---
Age one to nine	0	---	0	---	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---
Age ten to nineteen	1	---	0	---	0	---	0	---	0	---	0	---	1	---	3	---	1	---	0	---

*If number is less than 6, the rate is not calculated.

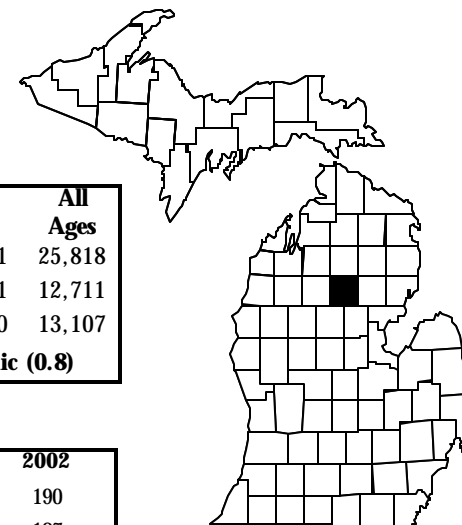
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Roscommon County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	184	1,040	1,292	1,610	1,560	1,287	935	1,206	1,463	1,726	1,871	1,768	1,891	1,918	6,251	25,818
Male	102	463	658	841	821	659	458	590	712	859	910	858	953	916	2,911	12,711
Female	82	393	634	769	739	628	477	616	751	867	961	910	938	1,002	3,340	13,107
Race(%):	White (98.2)		Black (0.5)		Native American (0.6)		Asian/Pacific Islander (0.3)		Multiple (0.5)		Ethnicity(%):		Hispanic (0.8)			

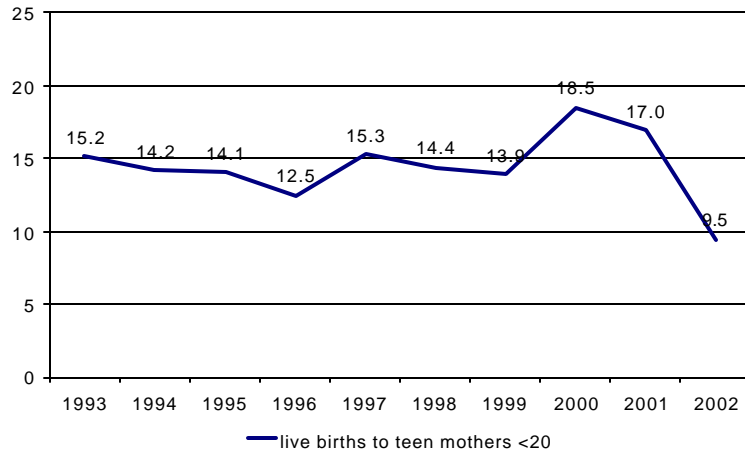
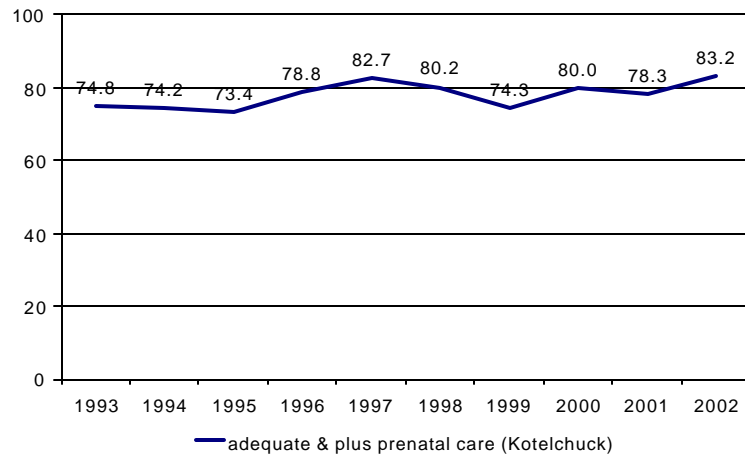
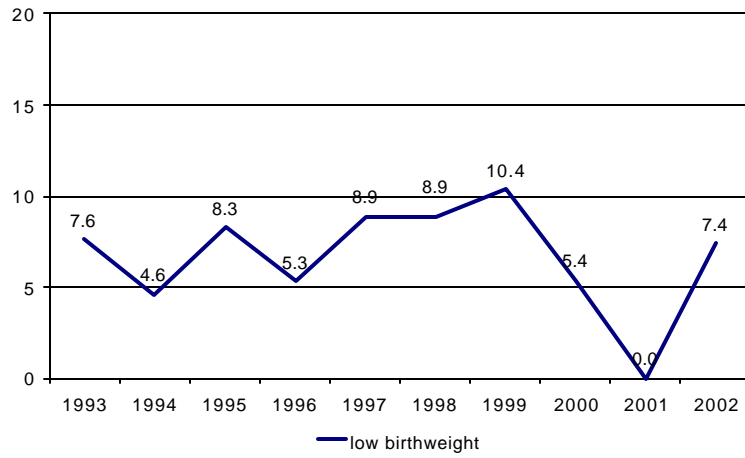
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	210	240	192	208	202	202	230	205	212	190
White	208	235	186	205	195	197	227	202	209	187
Black	---	---	---	---	---	---	---	---	---	---
American Indian	2	3	4	---	6	1	1	1	2	2
Asian & P.I.	---	1	2	3	1	4	---	2	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	2	---	1	---	3	---	2	---	3	---	3	---	9	3.9	3	---	0	---	4	---
1,500-2,499	14	6.7	10	4.2	13	6.8	9	4.3	15	7.4	15	7.4	15	6.5	8	3.9	5	---	10	5.3
Total < 2500	16	7.6	11	4.6	16	8.3	11	5.3	18	8.9	18	8.9	24	10.4	11	5.4	5	---	14	7.4
Preterm																				
Preterm < 37 weeks	31	14.8	20	8.3	19	9.9	15	7.2	24	11.9	23	11.4	33	14.3	14	6.8	23	10.8	20	10.5
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	157	74.8	178	74.2	141	73.4	164	78.8	167	82.7	162	80.2	171	74.3	164	80.0	166	78.3	158	83.2
Live Births to Teen Mothers																				
< 18	16	7.6	15	6.3	11	5.7	5	---	11	5.4	7	3.5	5	---	8	3.9	5	---	3	---
18-19	16	7.6	19	7.9	16	8.3	21	10.1	20	9.9	22	10.9	27	11.7	30	14.6	31	14.6	15	7.9
Total under 20	32	15.2	34	14.2	27	14.1	26	12.5	31	15.3	29	14.4	32	13.9	38	18.5	36	17.0	18	9.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	2	---	2	---	0	---	0	---	1	---	0	---	0	---	1	---	2	---
Infant deaths	4	---	1	---	3	---	1	---	1	---	4	---	2	---	2	---	0	---	2	---
Neonatal	3	---	1	---	3	---	1	---	1	---	2	---	2	---	1	---	0	---	1	---
Postneonatal	1	---	0	---	0	---	0	---	0	---	2	---	0	---	1	---	0	---	1	---
Age one to nine	2	---	1	---	1	---	1	---	2	---	0	---	3	---	0	---	1	---	0	---
Age ten to nineteen	2	---	1	---	0	---	2	---	1	---	1	---	3	---	0	---	3	---	0	---

*If number is less than 6, the rate is not calculated.

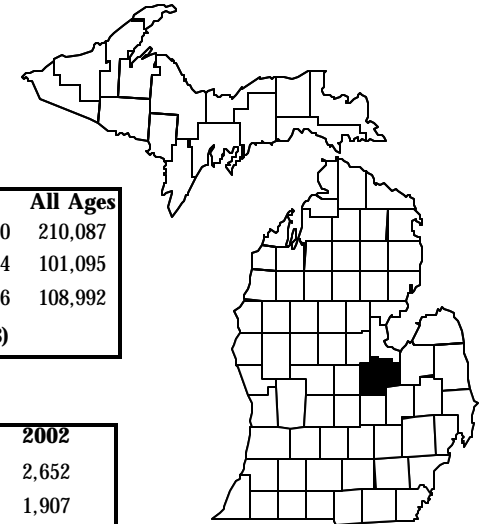
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Saginaw County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	2,805	13,933	14,871	16,402	15,369	14,143	11,684	13,434	14,279	15,899	15,903	14,771	11,660	9,049	28,690	210,087
Male	1,422	5,604	7,660	8,335	7,954	7,005	5,651	6,601	6,944	7,526	7,640	7,040	5,614	4,405	11,694	101,095
Female	1,383	5,524	7,211	8,067	7,415	7,138	6,033	6,833	7,335	8,373	8,263	7,731	6,046	4,644	16,996	108,992
Race(%):	White (78.1)		Black (19.2)		Native American (0.5)		Asian/Pacific Islander (0.9)		Multiple Ethnicity (%)		Hispanic (6.8)					

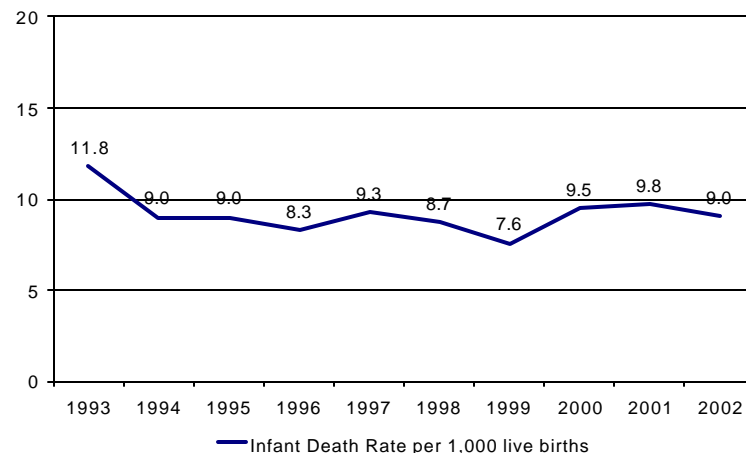
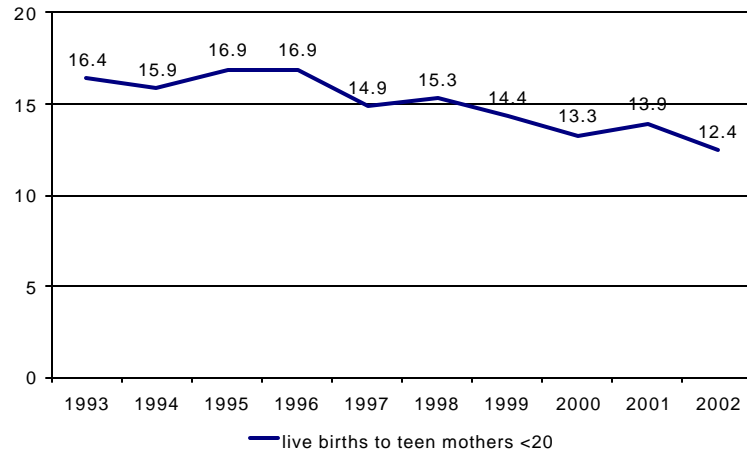
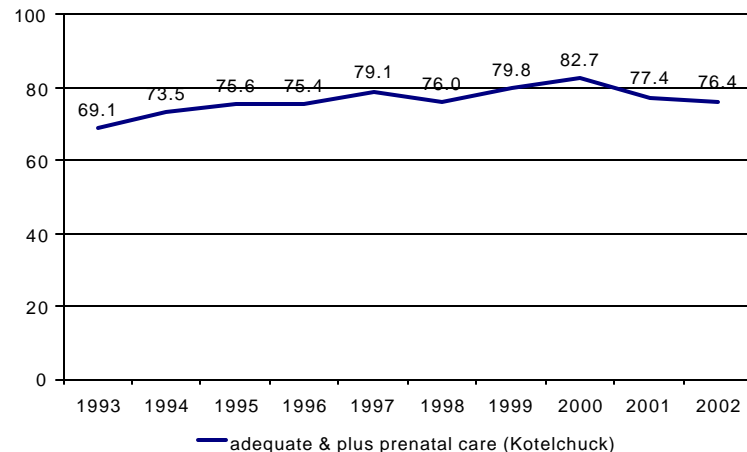
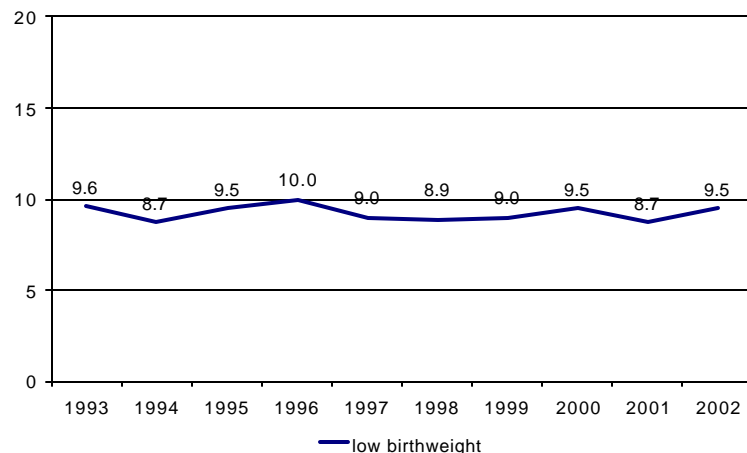
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	3,221	3,227	2,997	2,782	2,903	2,878	2,904	2,832	2,769	2,652
White	2,260	2,315	2,151	2,065	2,124	2,116	2,125	2,052	1,948	1,907
Black	909	865	791	671	739	727	735	742	781	721
American Indian	13	19	15	9	7	6	---	7	6	1
Asian & P.I.	27	22	34	35	31	26	39	29	29	22

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	67	2.1	62	1.9	66	2.2	66	2.4	59	2.0	45	1.6	54	1.9	46	1.6	51	1.8	61	2.3
1,500-2,499	242	7.5	219	6.8	219	7.3	213	7.7	203	7.0	212	7.4	206	7.1	222	7.8	191	6.9	190	7.2
Total < 2500	309	9.6	281	8.7	285	9.5	279	10.0	262	9.0	257	8.9	260	9.0	268	9.5	242	8.7	251	9.5
Preterm																				
Preterm < 37 weeks	462	14.3	416	12.9	371	12.4	355	12.8	408	14.1	358	12.4	368	12.7	353	12.5	335	12.1	336	12.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	2,225	69.1	2,373	73.5	2,266	75.6	2,098	75.4	2,295	79.1	2,186	76.0	2,318	79.8	2,341	82.7	2,144	77.4	2,025	76.4
Live Births to Teen Mothers																				
< 18	195	6.1	234	7.3	209	7.0	200	7.2	168	5.8	168	5.8	153	5.3	134	4.7	150	5.4	127	4.8
18-19	334	10.4	280	8.7	297	9.9	269	9.7	265	9.1	271	9.4	264	9.1	242	8.5	236	8.5	203	7.7
Total under 20	529	16.4	514	15.9	506	16.9	469	16.9	433	14.9	439	15.3	417	14.4	376	13.3	386	13.9	330	12.4
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	14	---	21	---	20	---	18	---	24	---	9	---	19	---	13	---	12	---
Infant deaths	38	11.8	29	9.0	27	9.0	23	8.3	27	9.3	25	8.7	22	7.6	27	9.5	27	9.8	24	9.0
Neonatal	27	8.4	21	6.5	16	5.3	17	6.1	20	6.9	18	6.3	14	4.8	20	7.1	19	6.9	16	6.0
Postneonatal	11	3.4	8	2.5	11	3.7	6	2.2	7	2.4	7	2.4	8	2.8	7	2.5	8	2.9	8	3.0
Age one to nine	4	---	7	---	4	---	16	---	8	---	4	---	9	---	4	---	2	---	9	---
Age ten to nineteen	21	---	19	---	19	---	15	---	19	---	21	---	12	---	16	---	11	---	15	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.2	2.1	1.1	Maternal health/prematurity
1500g+	Fetal	1.4	1.1	0.3	Maternal care
	Neonatal	1.8	1.2	0.6	Newborn care
	Postneonatal	2.4	1.0	1.4	Infant health
Total		8.8	5.4	3.4	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

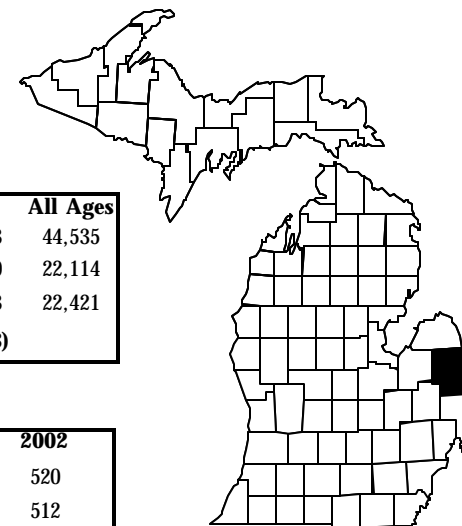
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Sanilac County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	549	2,774	3,031	3,460	3,459	2,639	2,246	2,647	3,148	3,619	3,294	2,859	2,381	2,115	6,863	44,535
Male	301	1,150	1,569	1,809	1,838	1,344	1,125	1,294	1,597	1,826	1,679	1,442	1,158	1,002	2,980	22,114
Female	248	1,075	1,462	1,651	1,621	1,295	1,121	1,353	1,551	1,793	1,615	1,417	1,223	1,113	3,883	22,421
Race(%):	White (98.3)		Black (0.4)		Native American (0.3)		Asian/Pacific Islander (0.3)		Multiple Race (0.7)		Hispanic (2.8)					

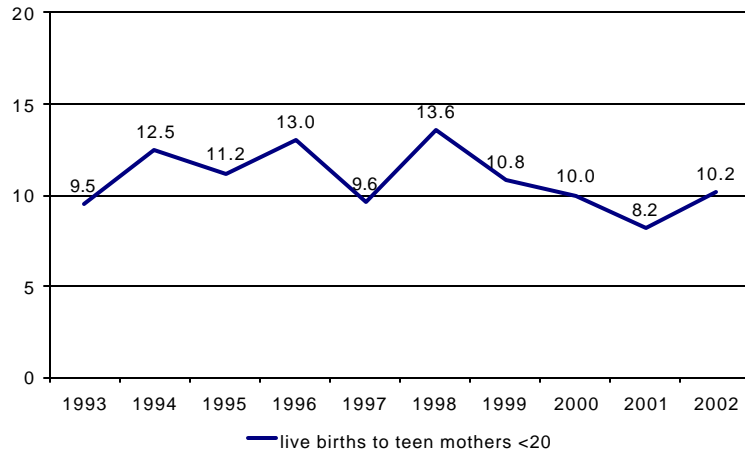
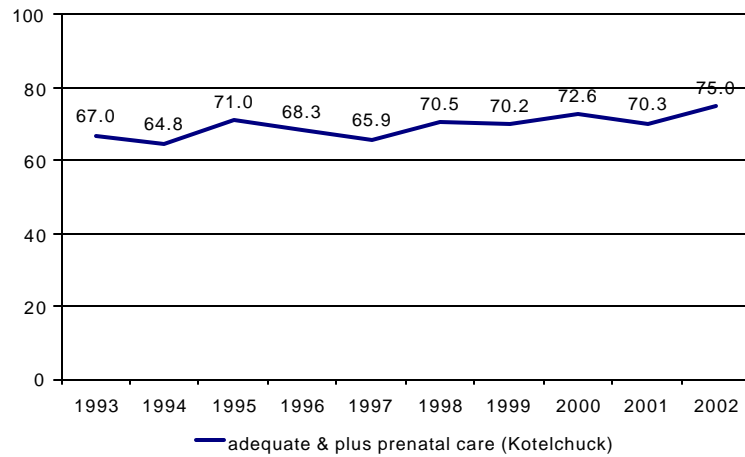
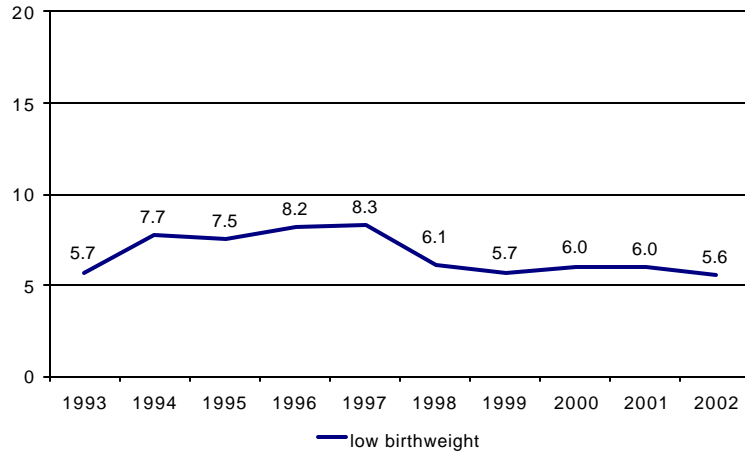
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	557	520	534	514	604	528	574	530	549	520
White	552	517	527	511	596	525	567	525	543	512
Black	---	---	1	---	2	1	---	---	1	---
American Indian	2	3	3	2	4	---	3	1	1	3
Asian & P.I.	2	---	---	1	2	2	4	4	2	5

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	5	---	2	---	7	1.3	7	1.4	9	1.5	8	1.5	7	1.2	1	---	7	1.3	5	---
1,500-2,499	27	4.8	38	7.3	33	6.2	35	6.8	41	6.8	24	4.5	26	4.5	31	5.8	26	4.7	24	4.6
Total < 2500	32	5.7	40	7.7	40	7.5	42	8.2	50	8.3	32	6.1	33	5.7	32	6.0	33	6.0	29	5.6
Preterm																				
Preterm < 37 weeks	59	10.6	61	11.7	59	11.0	66	12.8	65	10.8	54	10.2	63	11.0	48	9.1	54	9.8	45	8.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	373	67.0	337	64.8	379	71.0	351	68.3	398	65.9	372	70.5	403	70.2	385	72.6	386	70.3	390	75.0
Live Births to Teen Mothers																				
< 18	17	3.1	19	3.7	10	1.9	19	3.7	19	3.1	24	4.5	19	3.3	18	3.4	9	1.6	19	3.7
18-19	36	6.5	46	8.8	50	9.4	48	9.3	39	6.5	48	9.1	43	7.5	35	6.6	36	6.6	34	6.5
Total under 20	53	9.5	65	12.5	60	11.2	67	13.0	58	9.6	72	13.6	62	10.8	53	10.0	45	8.2	53	10.2
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	1	---	1	---	2	---	5	---	3	---	4	---	1	---	4	---	6	---	1	---
Infant deaths	2	---	7	13.5	7	13.1	3	---	0	---	2	---	5	---	3	---	5	---	1	---
Neonatal	2	---	3	---	5	---	2	---	0	---	2	---	4	---	2	---	3	---	1	---
Postneonatal	0	---	4	---	2	---	1	---	0	---	0	---	1	---	1	---	2	---	0	---
Age one to nine	1	---	1	---	2	---	1	---	1	---	3	---	2	---	2	---	0	---	1	---
Age ten to nineteen	2	---	8	---	4	---	3	---	2	---	2	---	4	---	7	---	6	---	1	---

*If number is less than 6, the rate is not calculated.

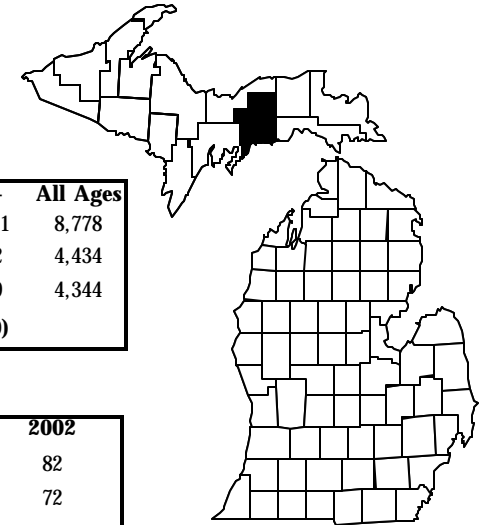
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Schoolcraft County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	70	431	517	588	583	473	430	485	557	687	701	621	498	546	1,661	8,778
Male	37	184	267	297	302	276	213	268	289	337	366	324	245	277	752	4,434
Female	33	177	250	291	281	197	217	217	268	350	335	297	253	269	909	4,344
Race(%):	White (88.9)		Black (2.2)		Native American (6.0)		Asian/Pacific Islander (0.5)		Multiple Race (2.4)		Hispanic (1.0)					

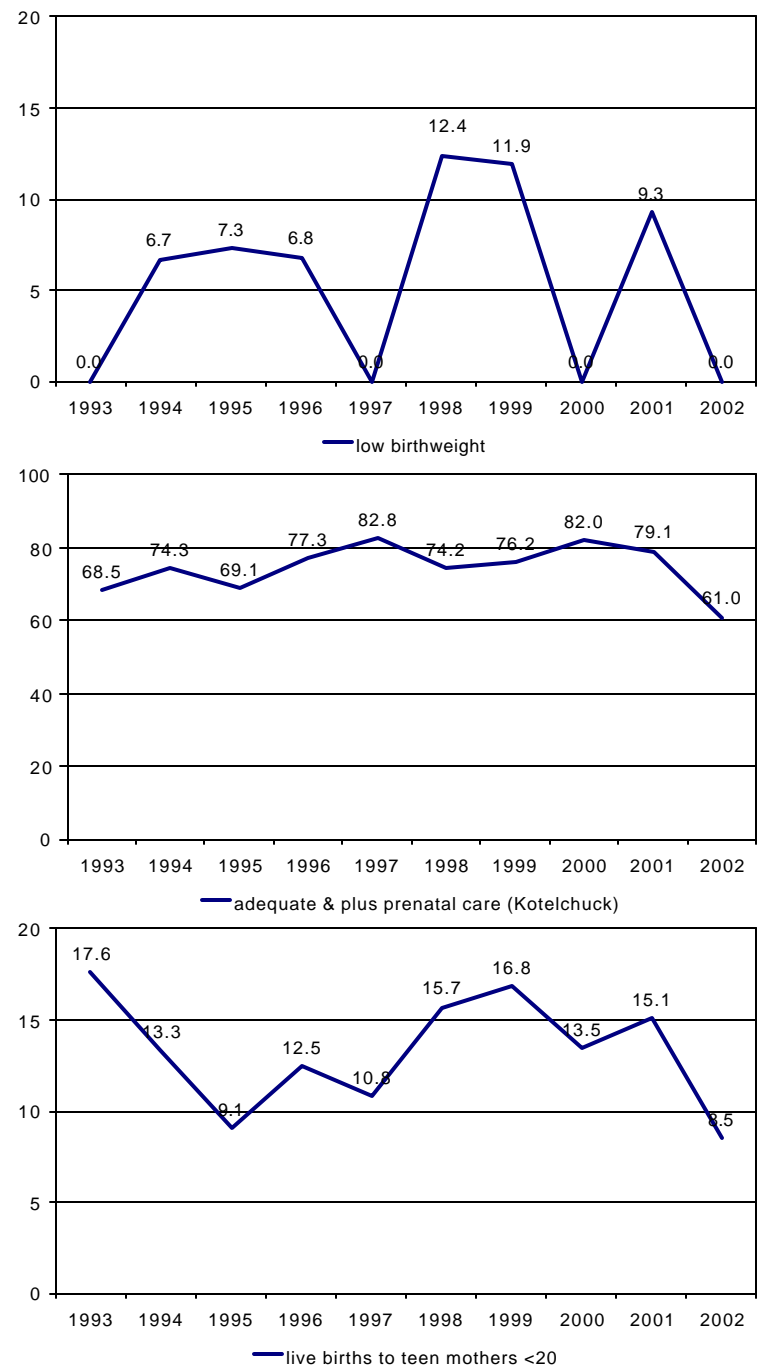
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	108	105	110	88	93	89	101	89	86	82
White	104	94	103	83	82	84	93	85	76	72
Black	---	---	---	---	---	---	---	---	1	---
American Indian	4	11	6	5	10	5	6	4	8	9
Asian & P.I.	---	---	1	---	1	---	2	---	1	---

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	0	---	1	---	0	---	1	---	0	---	1	---	0	---	0	---	1	---	0	---
1,500-2,499	5	---	6	5.7	8	7.3	5	---	5	---	10	11.2	12	11.9	4	---	7	8.1	4	---
Total < 2500	5	---	7	6.7	8	7.3	6	6.8	5	---	11	12.4	12	11.9	4	---	8	9.3	4	---
Preterm																				
Preterm < 37 weeks	11	10.2	8	7.6	12	10.9	4	---	5	---	7	7.9	15	14.9	10	11.2	8	9.3	4	---
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	74	68.5	78	74.3	76	69.1	68	77.3	77	82.8	66	74.2	77	76.2	73	82.0	68	79.1	50	61.0
Live Births to Teen Mothers																				
< 18	7	6.5	4	---	4	---	6	6.8	4	---	5	---	0	---	2	---	5	---	3	---
18-19	12	11.1	10	9.5	6	5.5	5	---	6	6.5	9	10.1	17	16.8	10	11.2	8	9.3	4	---
Total under 20	19	17.6	14	13.3	10	9.1	11	12.5	10	10.8	14	15.7	17	16.8	12	13.5	13	15.1	7	8.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	1	---	0	---	0	---	2	---	0	---	0	---	0	---	1	---	1	---
Infant deaths	0	---	1	---	1	---	3	---	0	---	3	---	0	---	1	---	1	---	0	---
Neonatal	0	---	1	---	1	---	1	---	0	---	1	---	0	---	1	---	1	---	0	---
Postneonatal	0	---	0	---	0	---	2	---	0	---	2	---	0	---	0	---	0	---	0	---
Age one to nine	0	---	0	---	1	---	0	---	0	---	0	---	0	---	0	---	0	---	0	---
Age ten to nineteen	1	---	0	---	0	---	0	---	0	---	1	---	0	---	0	---	0	---	3	---

*If number is less than 6, the rate is not calculated.

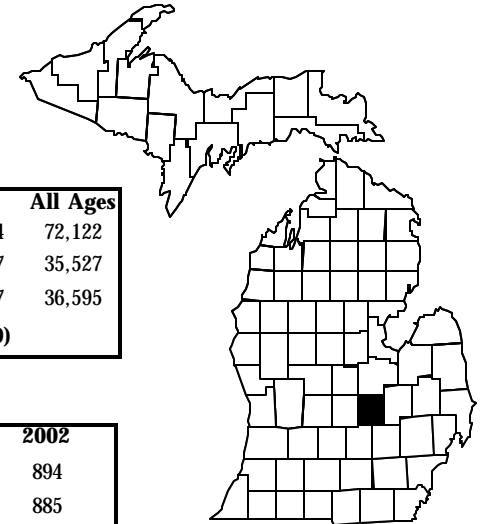
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Shiawasse County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	869	4,583	5,093	5,615	5,260	4,673	3,783	4,743	5,502	6,037	5,726	5,075	4,062	3,166	8,804	72,122
Male	461	1,905	2,680	2,844	2,673	2,360	1,908	2,330	2,707	3,027	2,838	2,552	1,990	1,575	3,677	35,527
Female	408	1,809	2,413	2,771	2,587	2,313	1,875	2,413	2,795	3,010	2,888	2,523	2,072	1,591	5,127	36,595
Race(%):	White (98.1)		Black (0.3)		Native American (0.5)		Asian/Pacific Islander (0.3)		Multiple Ethnicity (0.9)		Hispanic (1.9)					

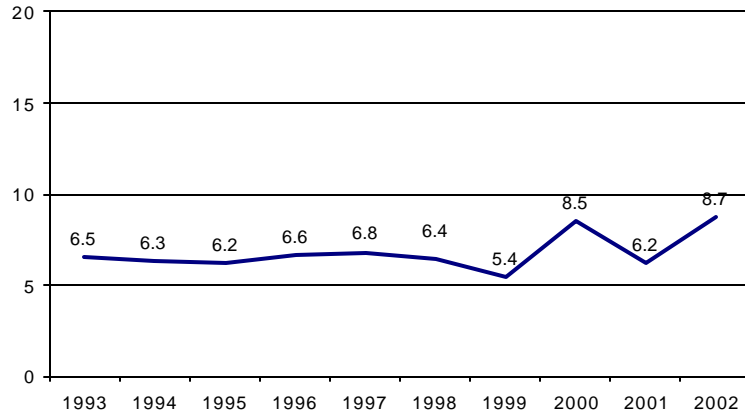
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,026	947	919	885	943	958	915	931	917	894
White	1,020	943	909	878	934	950	907	926	912	885
Black	1	1	3	---	1	3	---	---	2	3
American Indian	---	2	5	3	1	2	1	1	---	2
Asian & P.I.	4	1	1	4	6	2	6	1	2	3

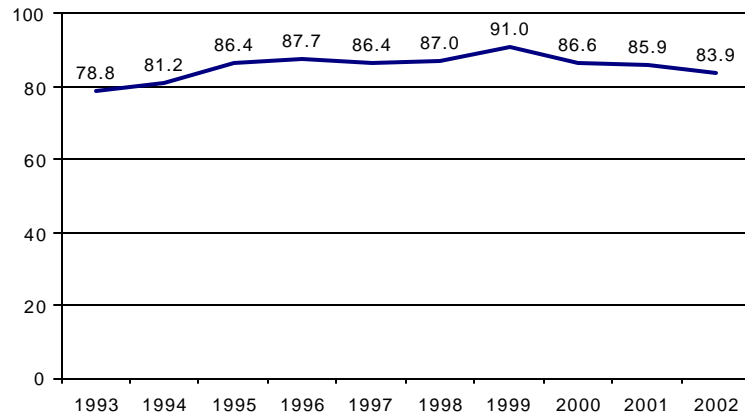
	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	11	1.1	6	0.6	7	0.8	12	1.4	11	1.2	16	1.7	10	1.1	18	1.9	8	0.9	13	1.5
1,500-2,499	56	5.5	54	5.7	50	5.4	46	5.2	53	5.6	45	4.7	39	4.3	61	6.6	49	5.3	65	7.3
Total < 2500	67	6.5	60	6.3	57	6.2	58	6.6	64	6.8	61	6.4	49	5.4	79	8.5	57	6.2	78	8.7
Preterm																				
Preterm < 37 weeks	104	10.1	82	8.7	90	9.8	75	8.5	100	10.6	94	9.8	75	8.2	94	10.1	91	9.9	73	8.2
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	808	78.8	769	81.2	794	86.4	776	87.7	815	86.4	833	87.0	833	91.0	806	86.6	788	85.9	750	83.9
Live Births to Teen Mothers																				
< 18	44	4.3	50	5.3	36	3.9	36	4.1	25	2.7	42	4.4	30	3.3	35	3.8	32	3.5	38	4.3
18-19	84	8.2	78	8.2	92	10.0	81	9.2	91	9.7	86	9.0	76	8.3	71	7.6	68	7.4	63	7.0
Total under 20	128	12.5	128	13.5	128	13.9	117	13.2	116	12.3	128	13.4	106	11.6	106	11.4	100	10.9	101	11.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	6	---	6	---	6	---	4	---	7	---	3	---	6	---	6	---	2	---	10	---
Infant deaths	5	---	5	---	5	---	3	---	8	8.5	8	8.4	4	---	5	---	5	---	12	13.4
Neonatal	3	---	3	---	3	---	2	---	6	6.4	5	---	3	---	5	---	3	---	5	---
Postneonatal	2	---	2	---	2	---	1	---	2	---	3	---	1	---	0	---	2	---	7	7.8
Age one to nine	3	---	1	---	2	---	2	---	4	---	2	---	1	---	0	---	3	---	0	---
Age ten to nineteen	7	---	7	---	4	---	6	---	2	---	3	---	2	---	4	---	10	---	7	---

*If number is less than 6, the rate is not calculated.

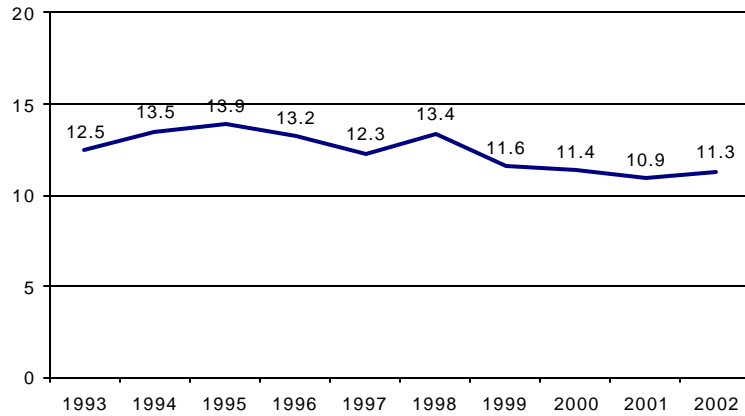
TRENDS (1993-2002)



— low birthweight



— adequate & plus prenatal care (Kotelchuck)

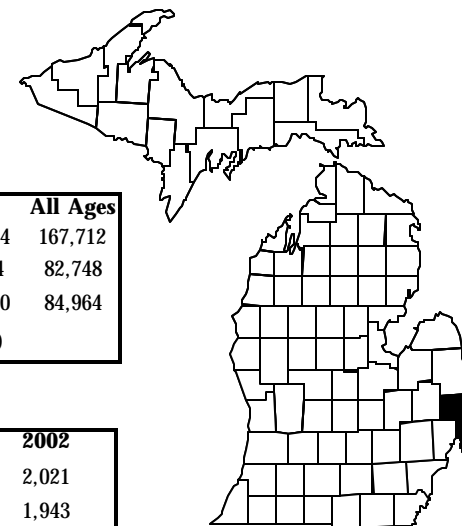


— live births to teen mothers <20

MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

St. Clair County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	2,073	10,672	11,850	12,950	12,165	10,501	9,086	11,391	13,373	14,245	13,194	11,486	9,157	7,058	20,584	167,712
Male	1,079	4,433	6,017	6,627	6,249	5,325	4,560	5,598	6,699	7,102	6,565	5,787	4,594	3,439	8,674	82,748
Female	994	4,166	5,833	6,323	5,916	5,176	4,526	5,793	6,674	7,143	6,629	5,699	4,563	3,619	11,910	84,964
Race(%):	White (95.8)		Black (2.1)		Native American (0.5)		Asian/Pacific Islander (0.5)		Multiple Ethnicity (%)		Hispanic (2.3)					

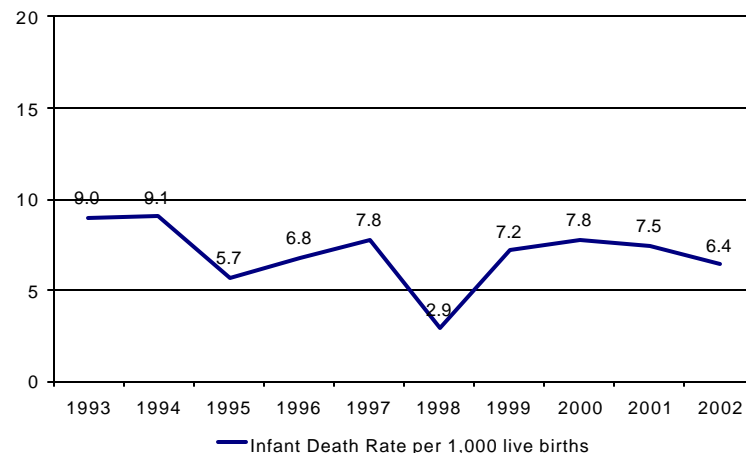
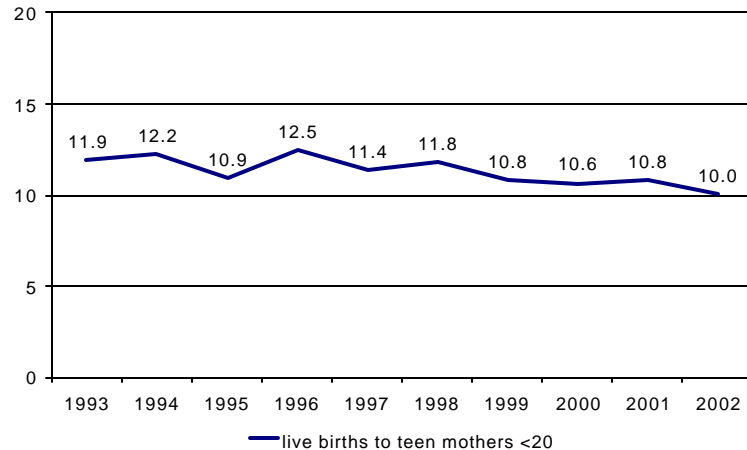
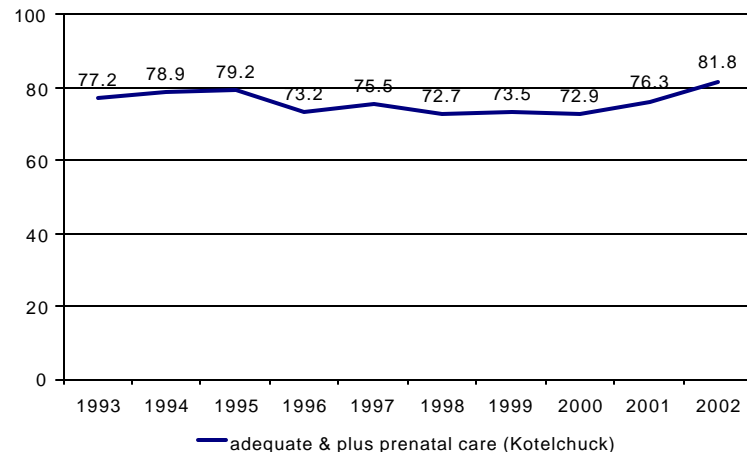
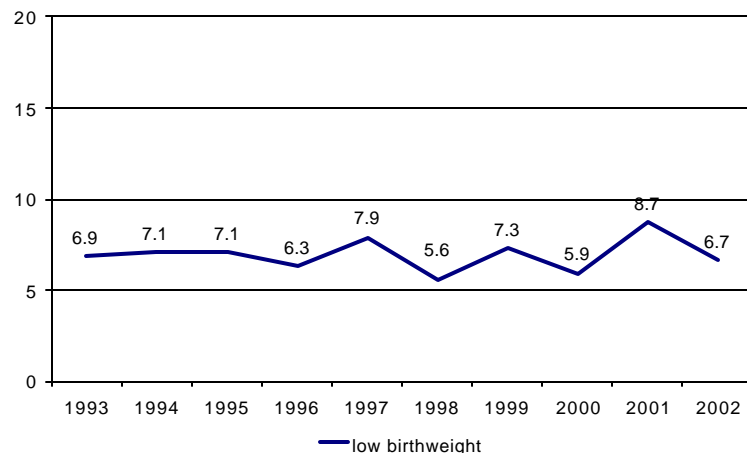
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	2,112	2,081	2,093	2,064	2,057	2,075	2,082	2,180	2,009	2,021
White	2,049	1,995	2,032	1,999	1,978	2,010	2,008	2,095	1,930	1,943
Black	47	62	47	35	44	34	50	46	50	50
American Indian	4	10	7	14	17	9	8	13	8	4
Asian & P.I.	5	9	6	13	14	15	9	16	20	22

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	29	1.4	29	1.4	26	1.2	12	0.6	35	1.7	10	0.5	31	1.5	28	1.3	36	1.8	23	1.1
1,500-2,499	116	5.5	118	5.7	122	5.8	119	5.8	128	6.2	107	5.2	122	5.9	101	4.6	139	6.9	112	5.5
Total < 2500	145	6.9	147	7.1	148	7.1	131	6.3	163	7.9	117	5.6	153	7.3	129	5.9	175	8.7	135	6.7
Preterm																				
Preterm < 37 weeks	205	9.7	198	9.5	223	10.7	209	10.1	239	11.6	202	9.7	222	10.7	238	10.9	247	12.3	241	11.9
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	1,630	77.2	1,642	78.9	1,658	79.2	1,511	73.2	1,553	75.5	1,508	72.7	1,530	73.5	1,590	72.9	1,533	76.3	1,653	81.8
Live Births to Teen Mothers																				
< 18	81	3.8	84	4.0	76	3.6	97	4.7	66	3.2	80	3.9	79	3.8	68	3.1	62	3.1	62	3.1
18-19	170	8.0	170	8.2	153	7.3	160	7.8	168	8.2	164	7.9	146	7.0	164	7.5	155	7.7	141	7.0
Total under 20	251	11.9	254	12.2	229	10.9	257	12.5	234	11.4	244	11.8	225	10.8	232	10.6	217	10.8	203	10.0
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	8	---	4	---	4	---	12	---	8	---	10	---	18	---	16	---	4	---	9	---
Infant deaths	19	9.0	19	9.1	12	5.7	14	6.8	16	7.8	6	2.9	15	7.2	17	7.8	15	7.5	13	6.4
Neonatal	13	6.2	12	5.8	10	4.8	9	4.4	13	6.3	3	---	12	5.8	11	5.0	9	4.5	8	4.0
Postneonatal	6	2.8	7	3.4	2	---	5	---	3	---	3	---	3	---	6	2.8	6	3.0	5	---
Age one to nine	6	---	7	---	1	---	7	---	5	---	2	---	8	---	3	---	2	---	3	---
Age ten to nineteen	12	---	14	---	8	---	14	---	11	---	8	---	7	---	10	---	11	---	8	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.2	2.1	1.1	Maternal health/prematurity
1500g+	Fetal	1.9	1.1	0.8	Maternal care
	Neonatal	1.6	1.2	0.4	Newborn care
	Postneonatal	1.3	1.0	0.3	Infant health
Total		8.0	5.4	2.6	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

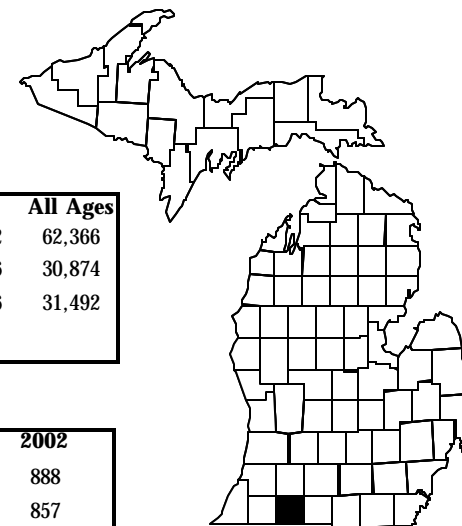
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

St. Joseph County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	875	4,405	4,546	4,885	4,654	4,158	3,671	4,051	4,298	4,891	4,565	4,083	3,438	2,679	8,042	62,366
Male	463	1,784	2,293	2,561	2,429	2,083	1,877	2,108	2,160	2,489	2,276	1,991	1,691	1,323	3,346	30,874
Female	412	1,746	2,253	2,324	2,225	2,075	1,794	1,943	2,138	2,402	2,289	2,092	1,747	1,356	4,696	31,492
Race(%):	White (94.9)		Black (2.8)		Native American (0.4)		Asian/Pacific Islander (0.7)		Multiple Ethnicity (0.2)		Hispanic (4.4)					

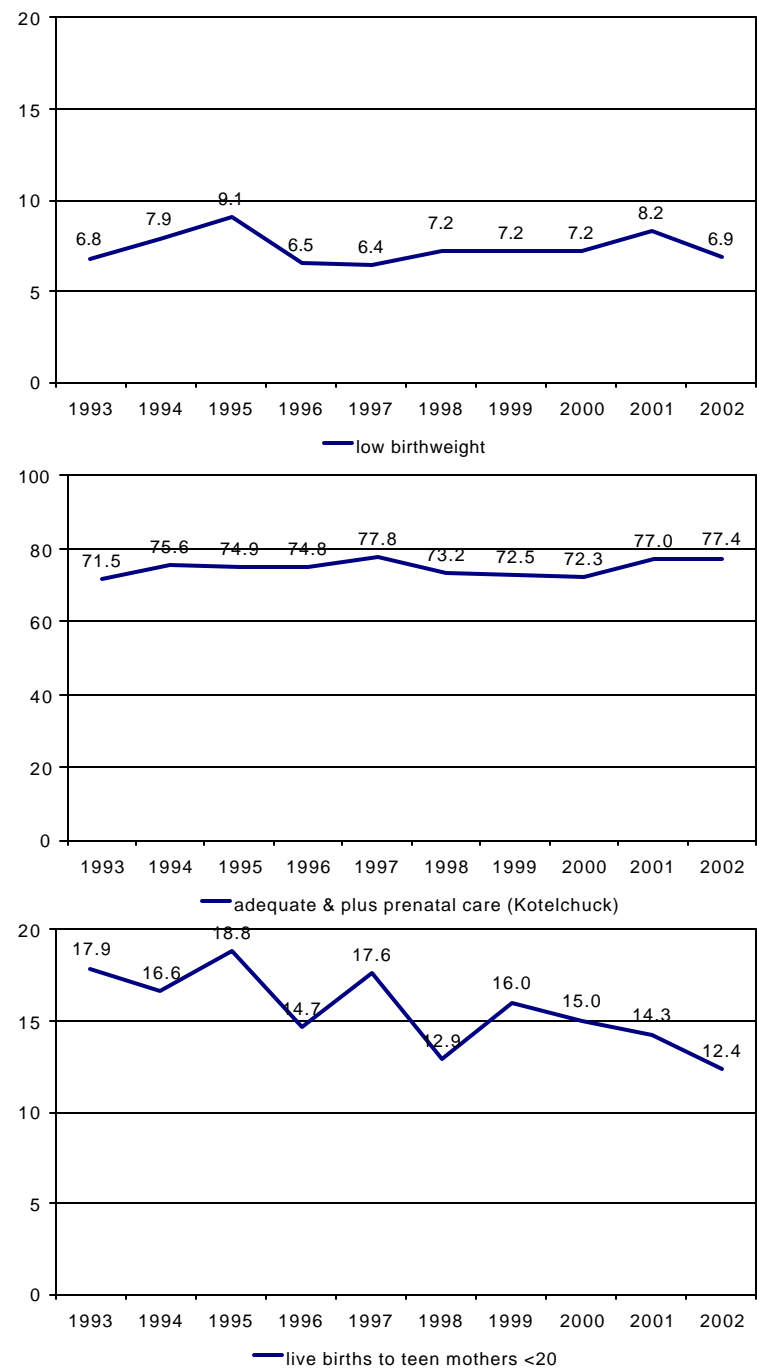
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	866	860	776	873	856	884	892	991	946	888
White	811	821	730	832	823	835	848	941	917	857
Black	40	32	34	32	24	32	28	40	25	28
American Indian	5	4	2	2	1	3	5	2	1	---
Asian & P.I.	7	3	9	5	7	10	11	7	3	2

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	10	1.2	8	0.9	7	0.9	11	1.3	3	---	9	1.0	20	2.2	12	1.2	22	2.3	10	1.1
1,500-2,499	49	5.7	60	7.0	64	8.2	46	5.3	52	6.1	55	6.2	44	4.9	59	6.0	56	5.9	51	5.7
Total < 2500	59	6.8	68	7.9	71	9.1	57	6.5	55	6.4	64	7.2	64	7.2	71	7.2	78	8.2	61	6.9
Preterm																				
Preterm < 37 weeks	83	9.6	84	9.8	83	10.7	82	9.4	79	9.2	96	10.9	96	10.8	95	9.6	96	10.1	89	10.0
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	619	71.5	650	75.6	581	74.9	653	74.8	666	77.8	647	73.2	647	72.5	716	72.3	728	77.0	687	77.4
Live Births to Teen Mothers																				
< 18	46	5.3	58	6.7	55	7.1	42	4.8	54	6.3	38	4.3	39	4.4	39	3.9	32	3.4	29	3.3
18-19	109	12.6	85	9.9	91	11.7	86	9.9	97	11.3	76	8.6	104	11.7	110	11.1	103	10.9	81	9.1
Total under 20	155	17.9	143	16.6	146	18.8	128	14.7	151	17.6	114	12.9	143	16.0	149	15.0	135	14.3	110	12.4
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	8	---	8	---	2	---	2	---	1	---	1	---	6	---	3	---	5	---	2	---
Infant deaths	6	6.9	4	---	6	7.7	7	8.0	5	---	4	---	3	---	6	6.1	13	13.7	7	7.9
Neonatal	4	---	2	---	3	---	6	6.9	3	---	2	---	2	---	3	---	11	11.6	4	---
Postneonatal	2	---	2	---	3	---	1	---	2	---	2	---	1	---	3	---	2	---	3	---
Age one to nine	5	---	4	---	3	---	1	---	1	---	8	---	3	---	3	---	4	---	2	---
Age ten to nineteen	1	---	4	---	11	---	3	---	6	---	2	---	2	---	4	---	4	---	4	---

*If number is less than 6, the rate is not calculated.

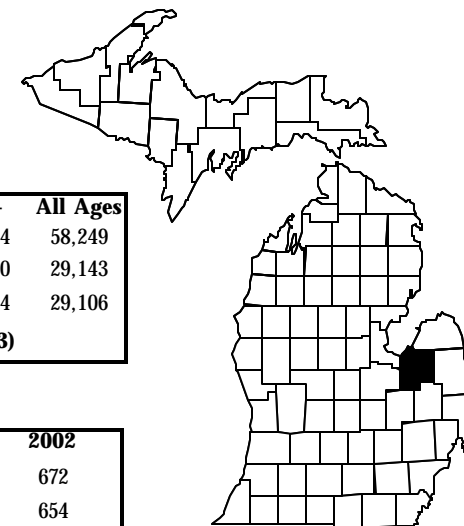
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Tuscola County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	640	3,319	3,867	4,572	4,669	3,762	2,966	3,612	4,226	4,782	4,548	4,039	3,451	2,762	7,674	58,249
Male	336	1,338	2,008	2,378	2,563	1,969	1,536	1,824	2,094	2,411	2,313	1,981	1,728	1,334	3,330	29,143
Female	304	1,341	1,859	2,194	2,106	1,793	1,430	1,788	2,132	2,371	2,235	2,058	1,723	1,428	4,344	29,106
Race(%):	White (97.1)		Black (1.1)		Native American (0.6)		Asian/Pacific Islander (0.3)		Multiple Race (0.3)		Hispanic (2.3)					

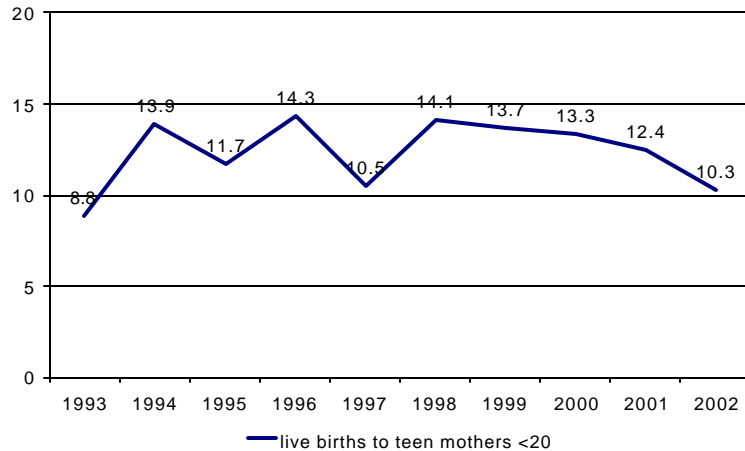
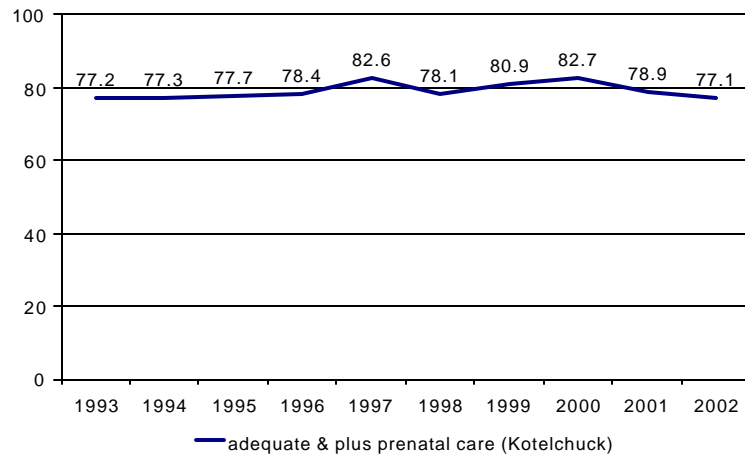
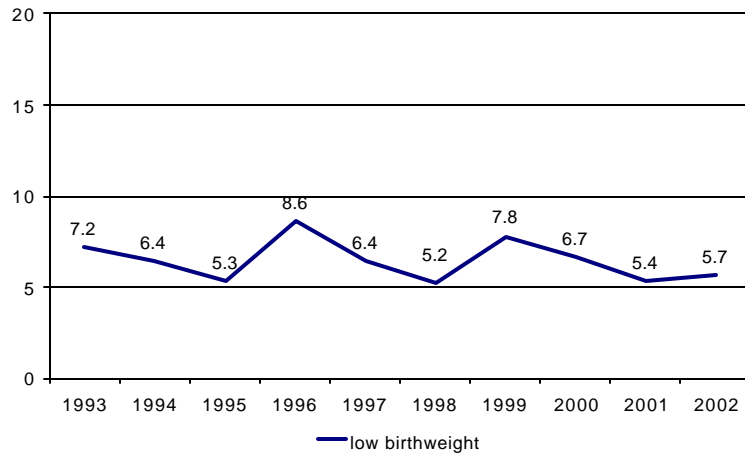
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	759	732	698	700	684	668	665	706	691	672
White	745	723	692	693	675	658	654	687	679	654
Black	5	4	2	5	1	2	5	5	2	8
American Indian	4	2	3	1	3	1	2	4	4	2
Asian & P.I.	4	1	1	1	4	5	3	10	5	8

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	13	1.7	9	1.2	8	1.1	13	1.9	8	1.2	6	0.9	12	1.8	11	1.6	6	0.9	10	1.5
1,500-2,499	42	5.5	38	5.2	29	4.2	47	6.7	36	5.3	29	4.3	40	6.0	36	5.1	31	4.5	28	4.2
Total < 2500	55	7.2	47	6.4	37	5.3	60	8.6	44	6.4	35	5.2	52	7.8	47	6.7	37	5.4	38	5.7
Preterm																				
Preterm < 37 weeks	87	11.5	85	11.6	63	9.0	73	10.4	73	10.7	69	10.3	74	11.1	76	10.8	69	10.0	68	10.1
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	586	77.2	566	77.3	542	77.7	549	78.4	565	82.6	522	78.1	538	80.9	584	82.7	545	78.9	518	77.1
Live Births to Teen Mothers																				
< 18	22	2.9	34	4.6	30	4.3	34	4.9	22	3.2	25	3.7	20	3.0	26	3.7	31	4.5	11	1.6
18-19	45	5.9	68	9.3	52	7.4	66	9.4	50	7.3	69	10.3	71	10.7	68	9.6	55	8.0	58	8.6
Total under 20	67	8.8	102	13.9	82	11.7	100	14.3	72	10.5	94	14.1	91	13.7	94	13.3	86	12.4	69	10.3
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	0	---	2	---	2	---	4	---	2	---	3	---	3	---	4	---	1	---	6	---
Infant deaths	11	14.5	6	8.2	7	10.0	6	8.6	10	14.6	6	9.0	4	---	6	8.5	4	---	9	13.4
Neonatal	6	7.9	4	---	6	8.6	4	---	9	13.2	4	---	1	---	3	---	3	---	6	8.9
Postneonatal	5	---	2	---	1	---	2	---	1	---	2	---	3	---	3	---	1	---	3	---
Age one to nine	3	---	7	---	4	---	3	---	2	---	2	---	1	---	3	---	2	---	2	---
Age ten to nineteen	10	---	9	---	7	---	8	---	5	---	6	---	8	---	7	---	8	---	4	---

*If number is less than 6, the rate is not calculated.

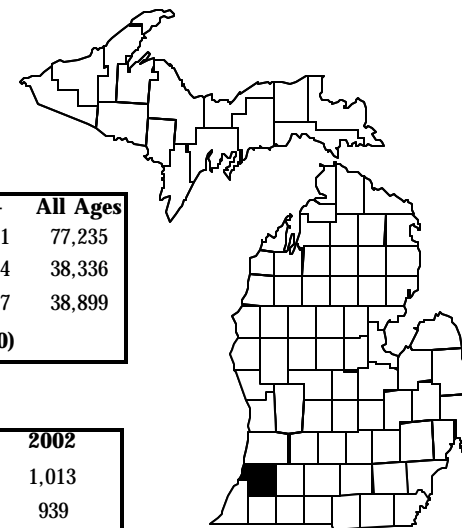
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Van Buren County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	1,011	5,146	5,534	6,387	6,088	4,821	3,919	4,678	5,549	6,492	6,205	5,461	4,257	3,277	9,421	77,235
Male	517	2,135	2,839	3,308	3,255	2,476	1,949	2,312	2,728	3,208	3,013	2,803	2,132	1,587	4,074	38,336
Female	494	2,000	2,695	3,079	2,833	2,345	1,970	2,366	2,821	3,284	3,192	2,658	2,125	1,690	5,347	38,899
Race(%):	White (91.9)			Black (5.1)			Native American (1.0)			Asian/Pacific Islander (0.4)			Multiple Ethnicity (0.3)			Hispanic (8.0)

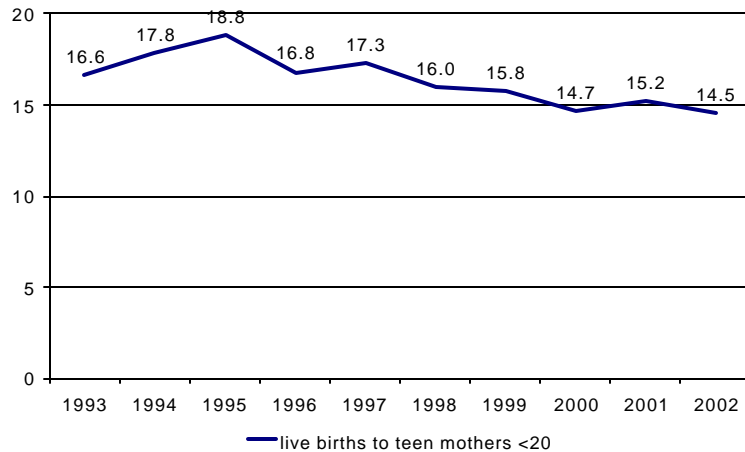
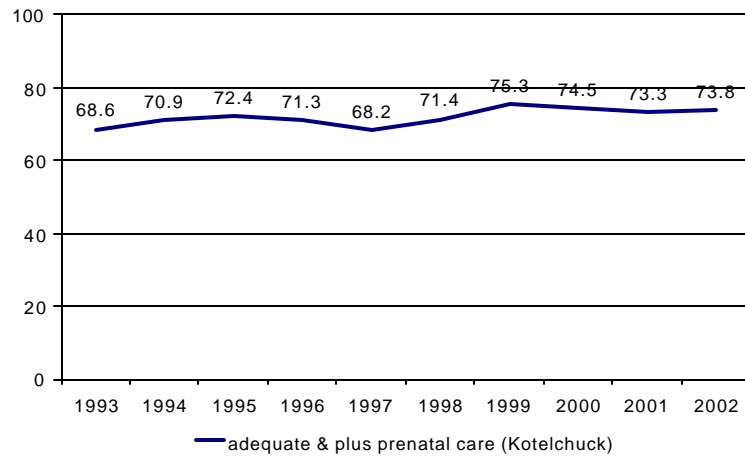
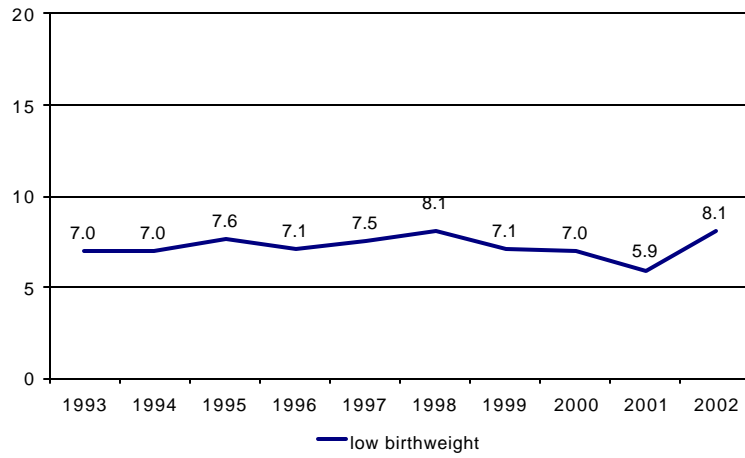
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	1,118	1,121	1,045	1,027	1,053	1,047	1,009	1,070	1,047	1,013
White	1,016	1,027	956	957	978	956	937	1,000	969	939
Black	91	82	78	63	64	68	58	59	58	57
American Indian	9	5	8	4	6	13	8	5	10	10
Asian & P.I.	2	6	1	3	5	5	4	4	6	6

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	8	0.7	11	1.0	16	1.5	14	1.4	21	2.0	21	2.0	10	1.0	12	1.1	13	1.2	12	1.2
1,500-2,499	70	6.3	67	6.0	63	6.0	59	5.7	58	5.5	64	6.1	62	6.1	63	5.9	49	4.7	70	6.9
Total < 2500	78	7.0	78	7.0	79	7.6	73	7.1	79	7.5	85	8.1	72	7.1	75	7.0	62	5.9	82	8.1
Preterm																				
Preterm < 37 weeks	115	10.3	117	10.4	124	11.9	102	9.9	93	8.8	123	11.7	119	11.8	119	11.1	106	10.1	108	10.7
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	767	68.6	795	70.9	757	72.4	732	71.3	718	68.2	748	71.4	760	75.3	797	74.5	767	73.3	748	73.8
Live Births to Teen Mothers																				
< 18	69	6.2	76	6.8	71	6.8	63	6.1	77	7.3	55	5.3	52	5.2	54	5.0	54	5.2	45	4.4
18-19	117	10.5	124	11.1	125	12.0	110	10.7	105	10.0	112	10.7	107	10.6	103	9.6	105	10.0	102	10.1
Total under 20	186	16.6	200	17.8	196	18.8	173	16.8	182	17.3	167	16.0	159	15.8	157	14.7	159	15.2	147	14.5
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	3	---	6	---	6	---	6	---	6	---	3	---	6	---	7	---	3	---	2	---
Infant deaths	8	7.2	4	---	7	6.7	5	---	12	11.4	16	15.3	8	7.9	3	---	10	9.6	5	---
Neonatal	3	---	2	---	5	---	3	---	10	9.5	10	9.6	5	5.0	1	---	8	7.6	3	---
Postneonatal	5	---	2	---	2	---	2	---	2	---	6	5.7	3	---	2	---	2	---	2	---
Age one to nine	6	---	2	---	6	---	4	---	4	---	3	---	9	---	1	---	0	---	2	---
Age ten to nineteen	6	---	9	---	6	---	7	---	2	---	6	---	5	---	9	---	8	---	11	---

*If number is less than 6, the rate is not calculated.

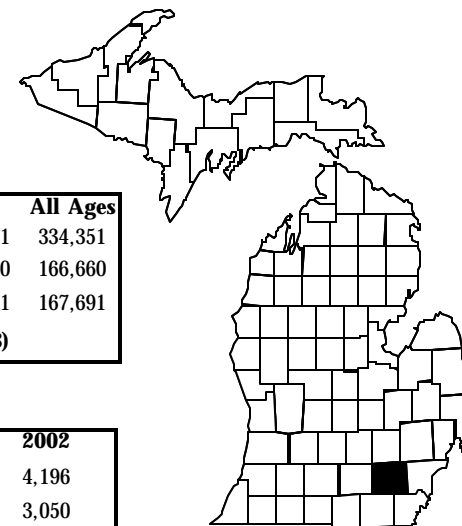
TRENDS (1993-2002)



MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

Washtenaw County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	4,387	20,891	20,276	20,610	27,620	36,738	28,656	28,176	25,585	25,167	23,911	22,104	16,035	10,931	27,651	334,351
Male	2,384	8,579	10,403	10,641	13,638	18,261	14,798	14,776	12,988	12,646	11,713	10,828	7,958	5,367	11,680	166,660
Female	2,003	7,925	9,873	9,969	13,982	18,477	13,858	13,400	12,597	12,521	12,198	11,276	8,077	5,564	15,971	167,691
Race(%):	White (78.0)		Black (12.3)		Native American (0.4)		Asian/Pacific Islander (7.2)		Multiple Ethnicity (%)		Hispanic (2.8)					

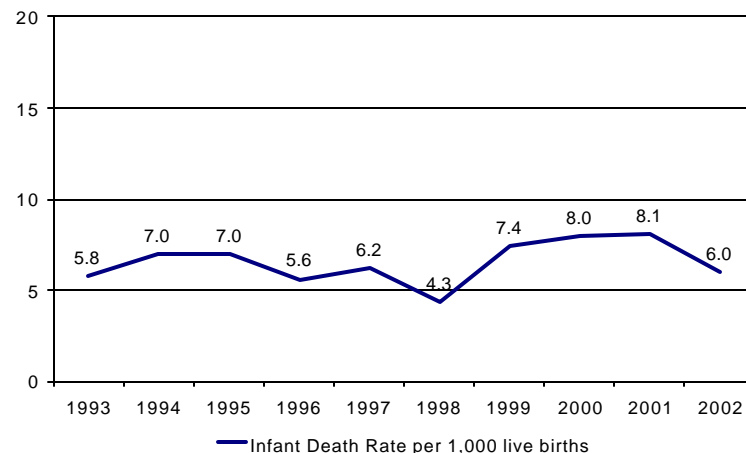
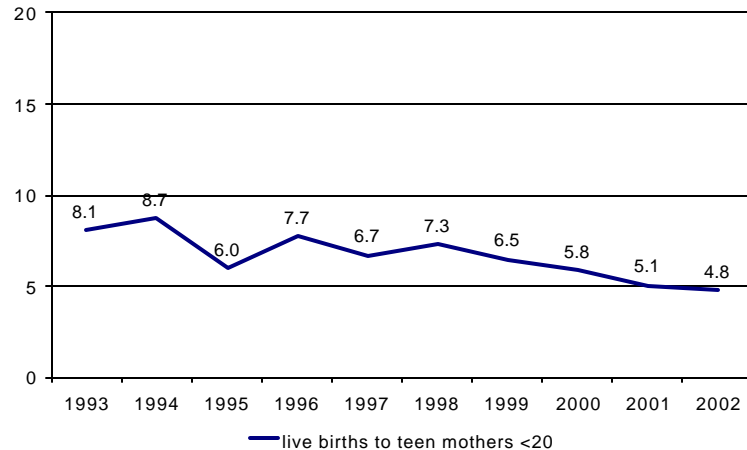
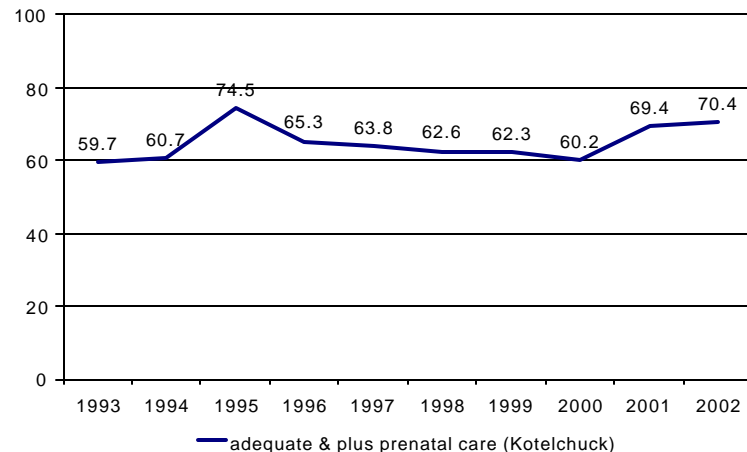
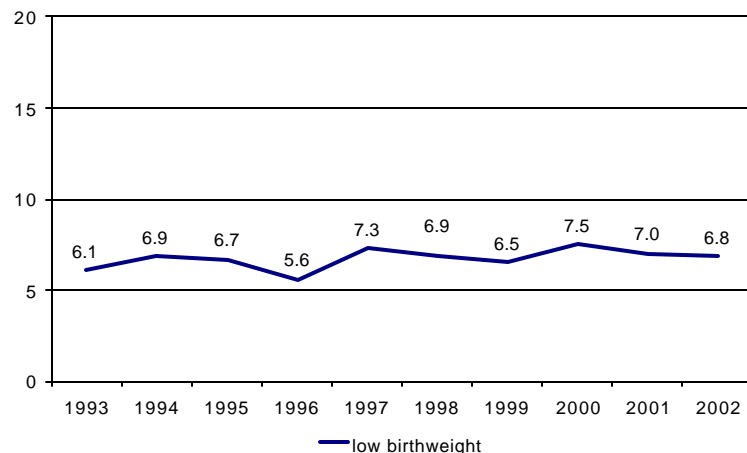
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	3,944	4,001	3,877	3,749	4,048	3,979	3,913	4,133	4,194	4,196
White	2,986	2,931	2,867	2,743	2,928	2,960	2,784	2,996	3,075	3,050
Black	645	637	534	516	603	583	605	596	672	631
American Indian	16	10	12	10	14	18	13	19	18	16
Asian & P.I.	212	253	277	265	308	309	338	354	383	407

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	35	0.9	49	1.2	59	1.5	43	1.1	60	1.5	52	1.3	54	1.4	59	1.4	64	1.5	57	1.4
1,500-2,499	204	5.2	227	5.7	202	5.2	166	4.4	236	5.8	222	5.6	200	5.1	250	6.0	230	5.5	230	5.5
Total < 2500	239	6.1	276	6.9	261	6.7	209	5.6	296	7.3	274	6.9	254	6.5	309	7.5	294	7.0	287	6.8
Preterm																				
Preterm < 37 weeks	367	9.3	350	8.7	277	7.1	172	4.6	361	8.9	332	8.3	270	6.9	335	8.1	350	8.3	402	9.6
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	2,355	59.7	2,428	60.7	2,890	74.5	2,449	65.3	2,584	63.8	2,492	62.6	2,439	62.3	2,486	60.2	2,910	69.4	2,952	70.4
Live Births to Teen Mothers																				
< 18	121	3.1	123	3.1	76	2.0	103	2.7	83	2.1	89	2.2	75	1.9	75	1.8	54	1.3	49	1.2
18-19	199	5.0	226	5.6	158	4.1	187	5.0	189	4.7	203	5.1	178	4.5	166	4.0	158	3.8	152	3.6
Total under 20	320	8.1	349	8.7	234	6.0	290	7.7	272	6.7	292	7.3	253	6.5	241	5.8	212	5.1	201	4.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	27	---	28	---	26	---	11	---	18	---	20	---	21	---	16	---	26	---	20	---
Infant deaths	23	5.8	28	7.0	27	7.0	21	5.6	25	6.2	17	4.3	29	7.4	33	8.0	34	8.1	25	6.0
Neonatal	18	4.6	21	5.2	16	4.1	14	3.7	22	5.4	14	3.5	23	5.9	25	6.0	19	4.5	21	5.0
Postneonatal	5	---	7	1.7	11	2.8	7	1.9	3	---	3	---	6	1.5	8	1.9	15	3.6	4	---
Age one to nine	13	---	5	---	8	---	3	---	4	---	5	---	5	---	10	---	11	---	7	---
Age ten to nineteen	11	---	14	---	16	---	11	---	13	---	16	---	10	---	12	---	9	---	17	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)

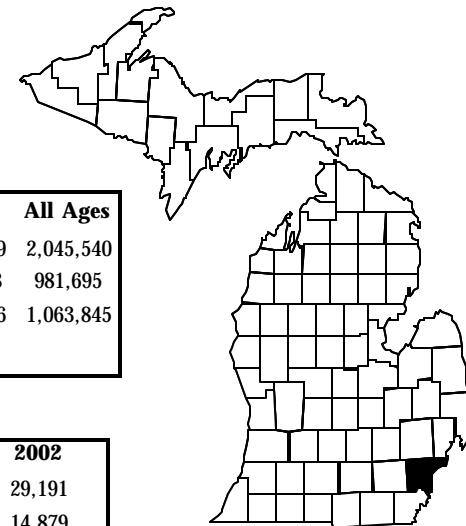


MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		3.2	2.1	1.1	Maternal health/prematurity
1500g+	Fetal	1.1	1.1	0.0	Maternal care
	Neonatal	1.5	1.2	0.3	Newborn care
	Postneonatal	1.2	1.0	0.2	Infant health
Total		7.0	5.4	1.6	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)
Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.
Neonatal deaths: Deaths occurring to infants less than 28 days of age.
Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Wayne County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	31,907	151,000	159,530	172,161	137,864	125,751	130,986	155,680	153,571	158,647	151,370	132,698	99,750	73,893	242,639	2,045,540
Male	16,172	60,526	81,196	87,530	70,136	62,577	62,928	75,472	74,971	76,791	72,854	63,138	47,293	34,198	95,913	981,695
Female	15,735	58,567	78,334	84,631	67,728	63,174	68,058	80,208	78,600	81,856	78,516	69,560	52,457	39,695	146,726	1,063,845
Race(%):	White (53.6)		Black (42.4)		Native American (0.4)		Asian/Pacific Islander (2.1)		Multiple Ethnicity (1.1)		Ethnicity(%):		Hispanic (4.1)			

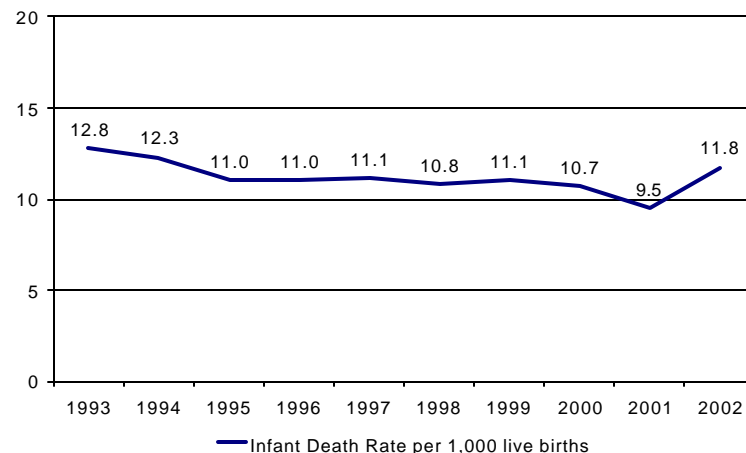
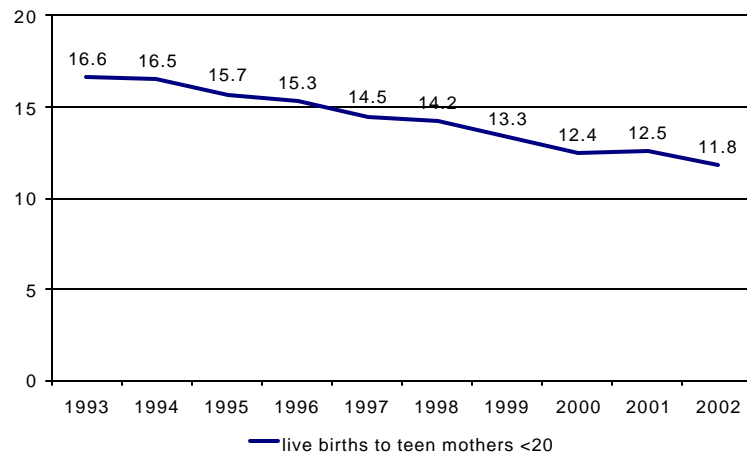
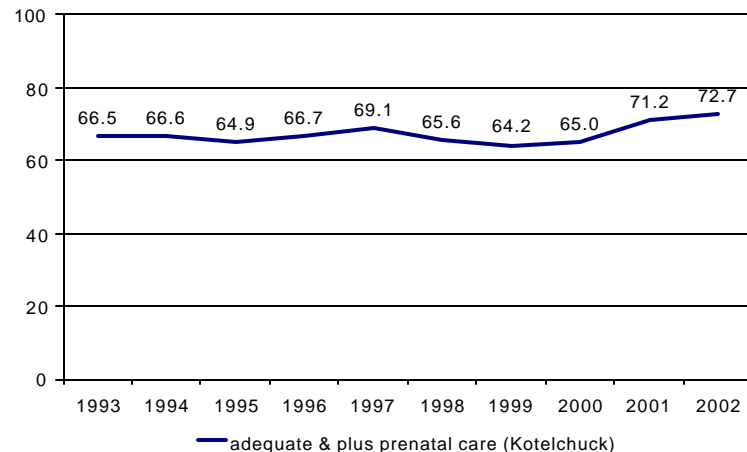
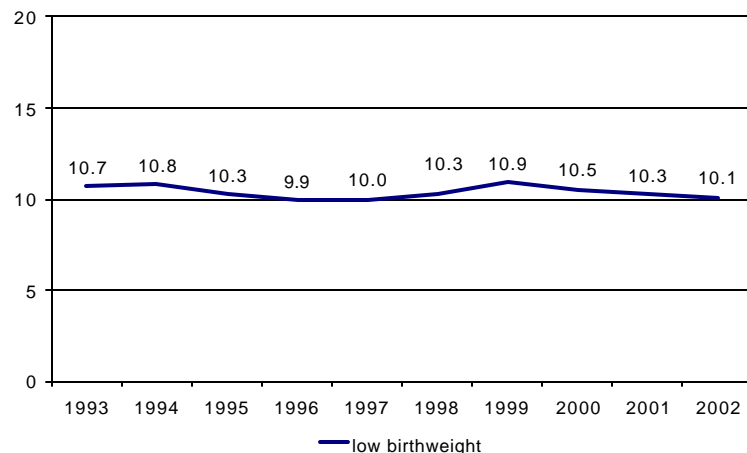
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	35,802	34,816	32,875	31,685	31,843	31,477	30,913	31,130	30,548	29,191
White	16,864	16,416	16,260	15,825	15,868	15,593	15,493	15,543	15,549	14,879
Black	18,369	17,584	15,832	15,021	15,125	15,065	14,326	14,439	13,933	13,049
American Indian	76	94	69	75	65	43	63	53	50	65
Asian & P.I.	406	586	545	592	634	651	711	732	817	991

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	811	2.3	857	2.5	706	2.1	652	2.1	707	2.2	755	2.4	762	2.5	687	2.2	681	2.2	677	2.3
1,500-2,499	3,034	8.5	2,893	8.3	2,675	8.1	2,488	7.9	2,464	7.7	2,473	7.9	2,610	8.4	2,595	8.3	2,456	8.0	2,271	7.8
Total < 2500	3,845	10.7	3,750	10.8	3,381	10.3	3,140	9.9	3,171	10.0	3,228	10.3	3,372	10.9	3,282	10.5	3,137	10.3	2,948	10.1
Preterm																				
Preterm < 37 weeks	5,307	14.8	4,971	14.3	4,389	13.4	4,168	13.2	4,273	13.4	4,322	13.7	4,256	13.8	4,387	14.1	4,171	13.7	3,886	13.3
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	23,792	66.5	23,173	66.6	21,326	64.9	21,129	66.7	21,990	69.1	20,663	65.6	19,834	64.2	20,247	65.0	21,764	71.2	21,208	72.7
Live Births to Teen Mothers																				
< 18	2,419	6.8	2,314	6.6	2,191	6.7	1,946	6.1	1,802	5.7	1,710	5.4	1,492	4.8	1,409	4.5	1,406	4.6	1,270	4.4
18-19	3,534	9.9	3,416	9.8	2,960	9.0	2,892	9.1	2,814	8.8	2,766	8.8	2,628	8.5	2,463	7.9	2,424	7.9	2,172	7.4
Total under 20	5,953	16.6	5,730	16.5	5,151	15.7	4,838	15.3	4,616	14.5	4,476	14.2	4,120	13.3	3,872	12.4	3,830	12.5	3,442	11.8
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)																				
Fetal deaths	209	---	181	---	175	---	222	---	284	---	266	---	227	---	261	---	230	---	192	---
Infant deaths	459	12.8	427	12.3	363	11.0	349	11.0	353	11.1	340	10.8	342	11.1	333	10.7	291	9.5	343	11.8
Neonatal	319	8.9	282	8.1	244	7.4	226	7.1	234	7.3	227	7.2	223	7.2	233	7.5	193	6.3	226	7.7
Postneonatal	140	3.9	145	4.2	119	3.6	123	3.9	119	3.7	113	3.6	119	3.8	100	3.2	98	3.2	117	4.0
Age one to nine	138	---	115	---	116	---	99	---	93	---	108	---	100	---	89	---	71	---	86	---
Age ten to nineteen	235	---	242	---	221	---	192	---	174	---	153	---	140	---	143	---	145	---	136	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		4.6	2.1	2.5	Maternal health/prematurity
1500g+	Fetal	1.5	1.1	0.4	Maternal care
	Neonatal	1.5	1.2	0.3	Newborn care
	Postneonatal	2.7	1.0	1.7	Infant health
Total		10.3	5.4	4.9	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

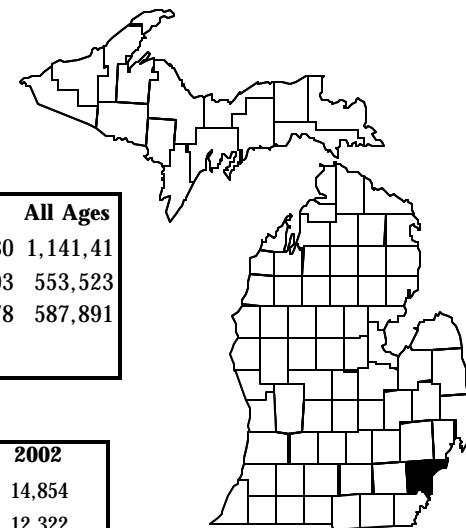
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Wayne County, excluding Detroit



1999 Population

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	13,276	57,916	79,776	77,763	71,341	67,985	86,168	90,921	96,918	95,034	84,099	72,508	56,161	43,567	147,980	1,141,411
Male	6,792	29,559	40,953	39,816	36,255	33,261	41,919	45,415	47,983	46,580	41,740	36,039	27,626	20,784	58,803	553,523
Female	6,484	28,360	38,823	37,948	35,087	34,724	44,247	45,507	48,935	48,453	42,359	36,469	28,535	22,782	89,178	587,891
Race(%):	White (89.9)			Black (7.7)			Native American (0.5)			Asian/Pacific Islander (2.0)			Ethnicity(%):			Hispanic (3.0)

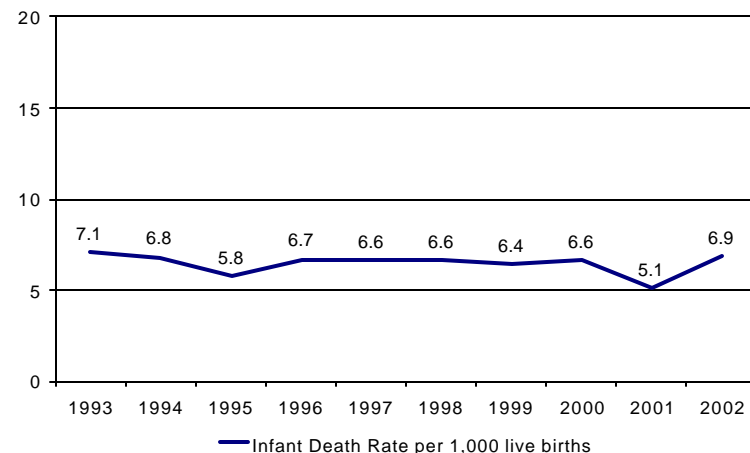
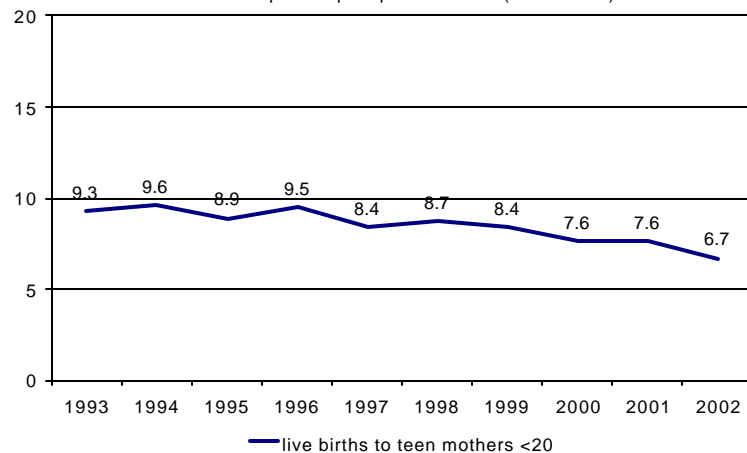
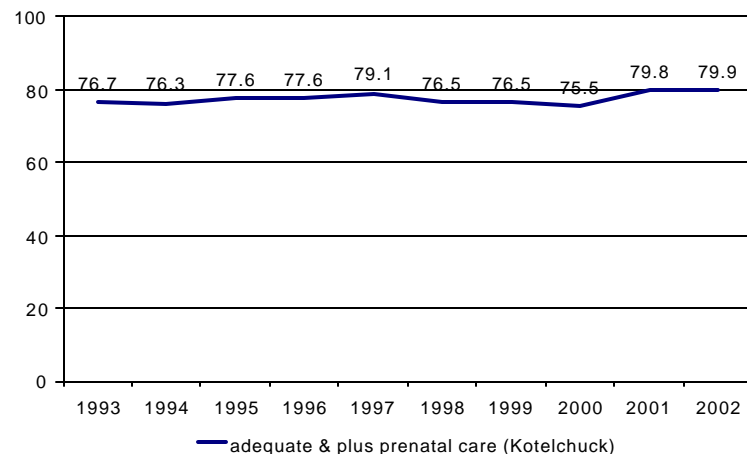
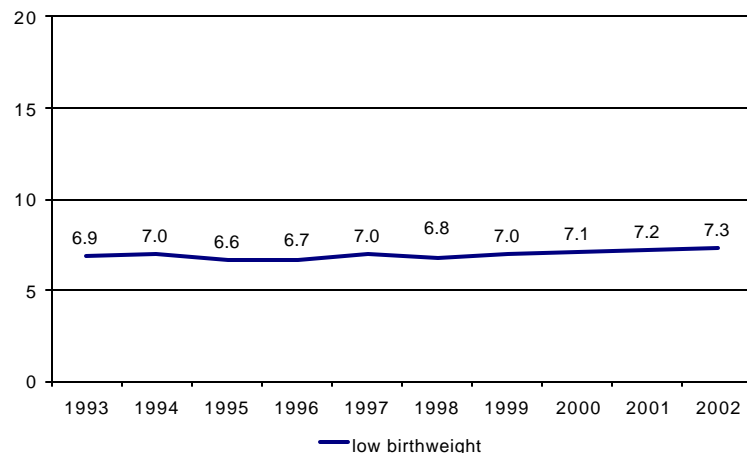
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	15,542	15,395	15,297	15,099	15,118	15,048	15,113	15,238	15,233	14,854
White	13,773	13,427	13,423	13,152	13,178	12,998	12,830	12,825	12,858	12,322
Black	1,455	1,479	1,373	1,416	1,394	1,476	1,528	1,627	1,579	1,603
American Indian	41	47	41	43	38	27	41	41	32	45
Asian & P.I.	218	338	336	363	403	458	502	529	650	743

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	196	1.3	234	1.5	200	1.3	182	1.2	214	1.4	220	1.5	192	1.3	210	1.4	211	1.4	207	1.4
1,500-2,499	878	5.6	847	5.5	808	5.3	832	5.5	840	5.6	807	5.4	871	5.8	868	5.7	885	5.8	882	5.9
Total < 2500	1,074	6.9	1,081	7.0	1,008	6.6	1,014	6.7	1,054	7.0	1,027	6.8	1,063	7.0	1,078	7.1	1,096	7.2	1,089	7.3
Preterm																				
Preterm < 37 weeks	1,568	10.1	1,572	10.2	1,423	9.3	1,391	9.2	1,482	9.8	1,545	10.3	1,514	10.0	1,675	11.0	1,646	10.8	1,547	10.4
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	11,913	76.7	11,742	76.3	11,867	77.6	11,722	77.6	11,958	79.1	11,518	76.5	11,561	76.5	11,509	75.5	12,150	79.8	11,868	79.9
Live Births to Teen Mothers																				
< 18	501	3.2	502	3.3	504	3.3	535	3.5	428	2.8	427	2.8	373	2.5	340	2.2	322	2.1	278	1.9
18-19	939	6.0	978	6.4	853	5.6	893	5.9	844	5.6	880	5.9	892	5.9	811	5.3	833	5.5	710	4.8
Total under 20	1,440	9.3	1,480	9.6	1,357	8.9	1,428	9.5	1,272	8.4	1,307	8.7	1,265	8.4	1,151	7.6	1,155	7.6	988	6.7
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	94	---	70	---	66	---	97	---	98	---	90	---	82	---	88	---	102	---	87	---
Infant deaths	111	7.1	105	6.8	89	5.8	101	6.7	100	6.6	99	6.6	97	6.4	100	6.6	77	5.1	103	6.9
Neonatal	75	4.8	67	4.4	64	4.2	66	4.4	68	4.5	68	4.5	64	4.2	74	4.9	53	3.5	73	4.9
Postneonatal	36	2.3	38	2.5	25	1.6	35	2.3	32	2.1	31	2.1	33	2.2	26	1.7	24	1.6	30	2.0
Age one to nine	41	---	33	---	33	---	32	---	22	---	26	---	35	---	25	---	26	---	23	---
Age ten to nineteen	54	---	60	---	78	---	55	---	55	---	44	---	44	---	36	---	46	---	40	---

*If number is less than 6, the rate is not calculated.

TRENDS (1993-2002)



MCH PREVENTION BY PERINATAL PERIODS OF RISK

Birth weight by age of death		Comparison of perinatal mortality rate			Focus of MCH prevention
		County	Standard	Difference	
< 1500g (all deaths)		2.6	2.1	0.5	Maternal health/prematurity
1500g+	Fetal	1.5	1.1	0.4	Maternal care
	Neonatal	1.2	1.2	0.0	Newborn care
	Postneonatal	1.7	1.0	0.7	Infant health
Total		7.0	5.4	1.6	

County: The rate was calculated by using live births, fetal and infant deaths in the county, 1998-2002.

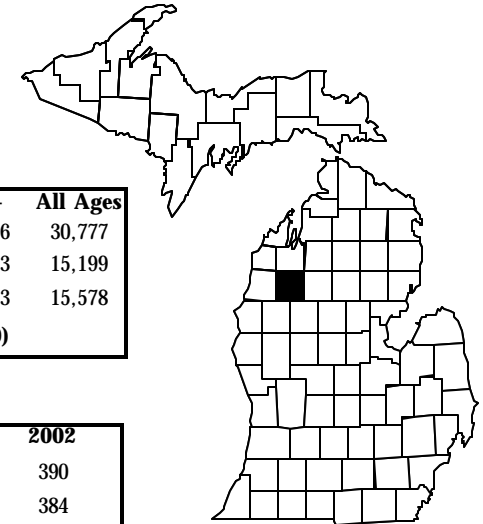
Standard: 1998-2002 Michigan non-Hispanic white women (20 and more years of age and 13 or more years of education.)

Fetal deaths: Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through the 20th week of gestation or weighing at least 400 grams with no signs of life.

Neonatal deaths: Deaths occurring to infants less than 28 days of age.

Postneonatal deaths: Deaths occurring to infants 28-364 days of age.

Wexford County



2002 Population Estimate

	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	All Ages
Total	332	1,806	2,093	2,416	2,340	1,944	1,565	1,904	2,302	2,512	2,330	2,076	1,629	1,394	4,466	30,777
Male	149	751	1,085	1,265	1,245	983	800	957	1,150	1,264	1,127	1,065	792	663	1,903	15,199
Female	183	723	1,008	1,151	1,095	961	765	947	1,152	1,248	1,203	1,011	837	731	2,563	15,578
Race(%):	White (97.5)		Black (0.4)		Native American (0.7)		Asian/Pacific Islander (0.4)		Multiple Ethnicity (0.9)		Hispanic (1.0)					

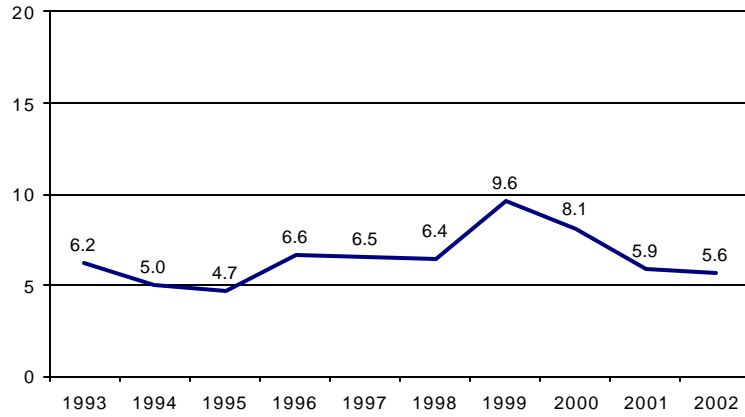
Live Births

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	436	400	379	378	337	406	408	382	393	390
White	430	391	374	370	329	400	401	375	384	384
Black	---	---	1	2	1	---	---	---	---	---
American Indian	2	3	---	5	4	3	1	3	3	1
Asian & P.I.	3	5	3	1	2	3	5	3	6	5

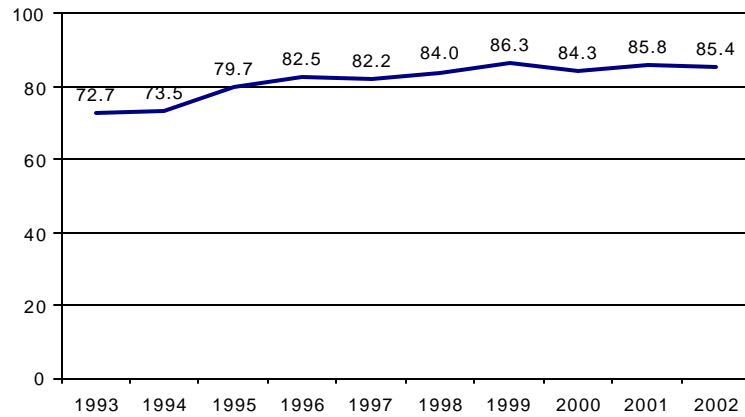
	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low Birth Weight																				
< 1500	5	---	0	---	3	---	2	---	3	---	8	2.0	8	2.0	7	1.8	8	2.0	6	1.5
1,500-2,499	22	5.0	20	5.0	15	4.0	23	6.1	19	5.6	18	4.4	31	7.6	24	6.3	15	3.8	16	4.1
Total < 2500	27	6.2	20	5.0	18	4.7	25	6.6	22	6.5	26	6.4	39	9.6	31	8.1	23	5.9	22	5.6
Preterm																				
Preterm < 37 weeks	30	6.9	29	7.3	32	8.4	33	8.7	30	8.9	53	13.1	51	12.5	46	12.0	32	8.1	39	10.0
Adequacy of Prenatal Care Utilization (Kotelchuck)																				
Adequate & plus	317	72.7	294	73.5	302	79.7	312	82.5	277	82.2	341	84.0	352	86.3	322	84.3	337	85.8	333	85.4
Live Births to Teen Mothers																				
< 18	16	3.7	19	4.8	24	6.3	17	4.5	14	4.2	28	6.9	21	5.1	16	4.2	9	2.3	10	2.6
18-19	49	11.2	34	8.5	38	10.0	32	8.5	29	8.6	43	10.6	45	11.0	37	9.7	44	11.2	41	10.5
Total under 20	65	14.9	53	13.3	62	16.4	49	13.0	43	12.8	71	17.5	66	16.2	53	13.9	53	13.5	51	13.1
Fetal, Infant & Child Mortality (Number and rate/1,000 live births)*																				
Fetal deaths	2	---	2	---	1	---	4	---	4	---	1	---	0	---	1	---	5	---	3	---
Infant deaths	2	---	3	---	3	---	1	---	2	---	3	---	7	17.2	4	---	1	---	2	---
Neonatal	1	---	0	---	2	---	1	---	2	---	1	---	3	---	3	---	1	---	2	---
Postneonatal	1	---	3	---	1	---	0	---	0	---	2	---	4	---	1	---	0	---	0	---
Age one to nine	0	---	1	---	3	---	2	---	1	---	1	---	0	---	1	---	2	---	0	---
Age ten to nineteen	4	---	3	---	2	---	2	---	1	---	2	---	6	---	3	---	2	---	2	---

*If number is less than 6, the rate is not calculated.

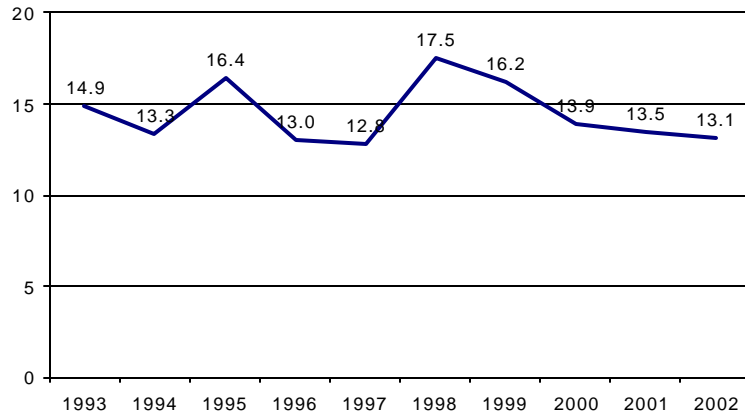
TRENDS (1993-2002)



— low birthweight



— adequate & plus prenatal care (Kotelchuck)



— live births to teen mothers <20

MCH Prevention By Perinatal Periods of Risk

The number of total feto-infant deaths is less than 60 so the perinatal period of risk analysis can not be calculated.

REFERENCE APPENDIX*

Residence - Usual place of residence for the person to whom the event occurred. For births and fetal births, residence is defined as the mother's usual place of residence.

Race – Race for mother, father, or decedent is as stated on certificate. Race of child is determined from the race of the parents.

Maternal Age –

Mother's Age <18 – Live births to women less than age 18 among. The indicator is often called the “school-age” birth rate or the “adolescent” birth rate.

Mother's Age <20 – Live births to women less than age 20 among births. This indicator is often called the “teen” birth rate.

Gestational Period – Number of completed weeks elapsed between the first day of the last menstrual period and the date of delivery.

Premature Birth – Live births were born before the end of the 37th week of gestation based on a calculated gestational age. The calculated gestational age is determined by subtracting the last menses date from the date of birth. If the month but not the day of the last menses is known, 15 is used for the day of the month.

Prenatal Care –

Care Began in the First Trimester – Mothers started prenatal care in the first trimester of the pregnancy.

Late or No Prenatal Care – Mother received late (Third Trimester) or no prenatal care.

Adequate/Inadequate Care (Kotelchuck Index) – Live births to the mother who received adequate or inadequate prenatal care according to the Kotelchuck Index of prenatal care. The index reflects both date of initiation and number of prenatal care visits.

Adequacy of Prenatal Care Utilization Index (APNCU) – This index, also known as the Kotelchuck Index of Prenatal Care, was designed as an improvement on the Kessner Index. It has 5 values: 1 = adequate plus, 2 = adequate, 3 = intermediate, 4 = inadequate and 5 = unknown. Its major advantage is that it divides the adequate into two categories. Those with adequate plus had other risk factors, which increased the number of visits. The index can serve as an indicator that some medical condition required additional prenatal care.

Birthweight – Weight for fetus or infant at time of delivery.

Normal Birthweight – live births in which the infant 2,500 grams (5 pounds, 8 ounces) or more among live births.

Low Birthweight – Birthweight is less than 2,500 grams (5 pounds, 8 ounces).

Very Low Birthweight – Birthweight is less than 1,500 grams (3 pounds, 5 ounces).

Extremely Low Birthweight – Birthweight is less than 750 grams (approximately 1 pound, 10.5 ounces).

Fetal, Infant and Child Mortality

Fetal Death – As defined by the World Health Organization; “death prior to the complete expulsion or extraction from its mother of a produce of conception, irrespective of the duration of pregnancy. The death is indicted by the fact that after such separation, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.” The definition used in Michigan includes only death prior to the completed expulsion or extraction from its mother of a product of conception, having passed through at least the 20th week of gestation or weighing at least 400 grams. (Note: This does not include induced terminations.)

Infant Death – Deaths occurring to individuals less than 1 year of age.

Neonatal Death – Deaths occurring to individuals less than 28 days of age.

Postneonatal Death – Deaths occurring to individuals 28 – 364 days of age.

Age-Specific Death – Resident deaths in specific age groups.

Mortality Rate

Infant Mortality Rate – Number of resident infant deaths divided by total resident live births x 1,000.

Neonatal Death Rate – Number of resident neonatal deaths divided by total resident live births x 1,000.

Postneonatal Death Rate – Number of resident postneonatal deaths divided by total resident live births x 1,000.

*Definitions from Michigan Department of Community Health, Bureau of Epidemiology, Vital Records and Health Data and Development Section.